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TEACHER'S MANUAL FOR GRAMMATICALITY AND PHRASE STRUCTURE RULES
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A GUIDE WAS PREPARED FOR TEACHING GRAMMATICALITY AND PHRASE STRUCTURE RULES IN A SEVENTH-GRADE LANGUAGE CURRICULUM. THE GUIDE DETAILED BACKGROUND INFORMATION, EXERCISES, AND QUESTIONS APPROPRIATE FOR TEACHING GRAMMATICALITY. TWELVE PHRASE STRUCTURE RULES WITH LINGUISTIC SYMBOLS WERE PRESENTED WITH EXPLANATIONS FOR USE. APPROPRIATE EXERCISES WERE DISCUSSED REQUIRING USE OF THE RULES AND SYMBOLS. AN ACCOMPANYING GUIDE WAS ALSO PREPARED FOR STUDENT USE (ED 010 145). (WN)

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OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL
for
GRAMMATICALITY
and
PHRASE STRUCTURE RULES 1-12

Language Curriculum I

The project reported herein was supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education and Welfare.

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OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL

(GRAMMATICALITY AND PHRASE STRUCTURE RULES 1-12)

Language Curriculum I

"Today We Have Naming of Parts. . . ."

Before proceeding directly to the grammar, let us pause a moment to consider the problems involved in defining word categories. Practically the whole concern of some school grammarians has been with definitions of the parts of speech. Yet, though both traditional and structural grammarians have spent an inordinate amount of time getting up definitions, it is not immediately clear that definitions of the *kind* they seek are desirable or even possible. The impossibility of the task can be seen if we consider the various forms that definitions have taken. The traditional grammarian was generally content with definitions that were vague because he was (like the rest of us) quite sure of what, say, a verb was. Thus he came up with empty and meaningless generalizations:

> A verb is a word that expresses action, condition, or state of being.
>
> A "verb is that part of speech by means of which we make an assertion or ask a question." (Curme, *English Grammar*, p. 22.)

The first definition excludes no word referring to action, condition, or existence; words like 'game', 'old', and 'existence' would qualify as verbs under this definition. The second allows, among the other things, any question word ("who. . . ?" "what. . . ?" etc.) to qualify as verb.

However, influenced by the apparent rigor of the scientific linguistics of the '40's and '50's, some traditionalists were forced into revising their definitions slightly, thus giving rise to hybrids of the following type:

> Verbs are "words that pattern like [the nonsense] *mirlated* [used in an earlier example: The floog sirily mirilated] "; "the saying word" . . . part of "the nucleus of an English sentence. . . in which one word seems to name something and the other seems to say something about it. . . "
>
> (L. M. Meyers, *Guide to American English*, 3rd ed., p. 39.)

Here the vagueness of traditional definitions is compounded by the vagueness of the structural approach; it is not at all clear what is meant by "pattern like." Does the author mean verbs pattern like *mirlated* with respect to the suffix (ed), or with respect to their position among the other nonsense words of the example? If the former, on what basis do we exclude the *learned* of "He was truly *learned*"?

The structural grammarians reacted strongly to the semantic vagueness of the definitions of the traditionalists. They decided that truly objective tests for membership in the parts-of-speech categories had to be devised. These tests would be "formal" in that only statements about audible properties would be allowed. Thus they said:

> A *verb* in English has the following characteristics:
>
> 1. Morphologically it has a distinction between singular and plural of the present tense in the third person (*write/writes*) and between present and past (*write/wrote*).
>
> 2. Distributionally it fits into one or more of the following frames:
>
>   a. The man___________s the house.
>   b. The man___________s there.
>   c. The man___________s wise.
>
> (Waldo E. Sweet, *Latin, a Structural Approach*, p. 21.

But *befall*, which certainly satisfies the criterion in (1), does not fit any of the frames in (2), if we apply the frames strictly (and there is no indication but common sense that we are not to be as "rigorous" in applying these tests as the structuralists were in devising them). James Sledd, in one of the more reasonable structural grammars, tried this definition:

> "A verb is any word belonging to an inflectional series which marks the difference between *present* and *past tense* and whose members will fit into a pattern like *sing*, *sings*, *sang*, *sung*, *singing* or *play*, *plays*, *played*, *played*, *playing*...
>
> (*A Short Introduction to English Grammar*, p. 73.)

Again, the criteria are based exclusively on phonological and morphological criteria: if we find forms in the language that seem related in the way *sing-sang-sung* are (this "i-a-u" change is one kind of "inflectional series"), then they must be the different forms of a verb. We are not to employ "higher" linguistic levels like semantics to tell us that certain forms which are acceptable from the standpoint of the test are clearly not what we intuitively know are "verbs":

> ding / dang / dung
>
> may, maize, made, maid, maying (as in "we'll no more go a-")

Or if we accept the morphological definition of an "adjective" as a word that shows inflectional distinctions between the positive form, the comparative form, and the superlative form, as in big, bigger, biggest (Sweet, 21), on what basis will lad, ladder, latticed or tear, terror, terraced be excluded?

We will continue to find, as we inspect, one after another, the traditional and structural definitions, that in one way or another they fail; for they will satisfy only insofar as we the speakers of English are able to bridge the gap between the definition and the category being defined. In other words, an English speaker's acceptance of the structural definitions depends upon his ability to reject such possibilities (as "ding / dang / dung" and "may, maize, made, maid, etc."), where the forms are literally acceptable by the definition but not acceptable to the intuition of a native speaker of the language. It is the intuition, not the rule, which makes the distinction. In an analogous fashion a traditional grammar (that is, a good traditional grammar) such as those of Ralph B. Long, Jespersen, Curme, etc.) becomes an adequate grammar of English (one which explains all the sentences of the language) only by virtue of the reader's or user's intelligence. When the grammar does not fully explain the way in which the language operates, the user must bridge the gap.

Transformational grammar tries to take the intelligent reader or user out of the grammar: it sets up a grammar of a purely mechanical kind, thus allowing the speaker of English to stand completely outside his language and to see exactly how it works, down to very deep levels. It is this goal which avoids setting up definitions that then depend on the intelligence of the reader for their implementation. To show the difference in the way the verbs of English behave, consider the following sentences:

(1) The house is large.

(2) The house seems large.

(3) The house has a sound roof.

(4) The house stands there.

(5) The house struck the tree.

The verbs in these sentences are examples of the five main subsets of the English verb. In (1), the verb will have to go to the front of the sentence to form a yes-or-no question:

(1) The house is large.
Is the house large?

But in others, the question will be formed by taking the tense and/or agreement away from the main verb and attaching these elements to "do" placed before the subject:

(2) The house seems large.
Does the house seem large?

(3) The house has a sound roof.
Does the house have a sound roof?

(For some people, Has the house a sound roof ? is possible)

(4) The house stands there.
Does the house stand there?

(5) The house struck the tree.
Did the house strike the tree?

In sentences similar to (1) and (2), if the predicate contains a noun, it must agree in number with the subject of the sentence:

(6) The man is a salesman. (not: The man are salesmen)
(6') The men are salesmen. (not: The men are a salesman)
(7) He seemed a teacher of the highest quality.
(7') They seemed teachers of the highest quality.

This is not true of sentences like (3) and (5): The house has three chimneys; The house struck the trees. Only (4) and (5) can be modified by a manner adverbial, words like quietly, hard, weakly, etc.:

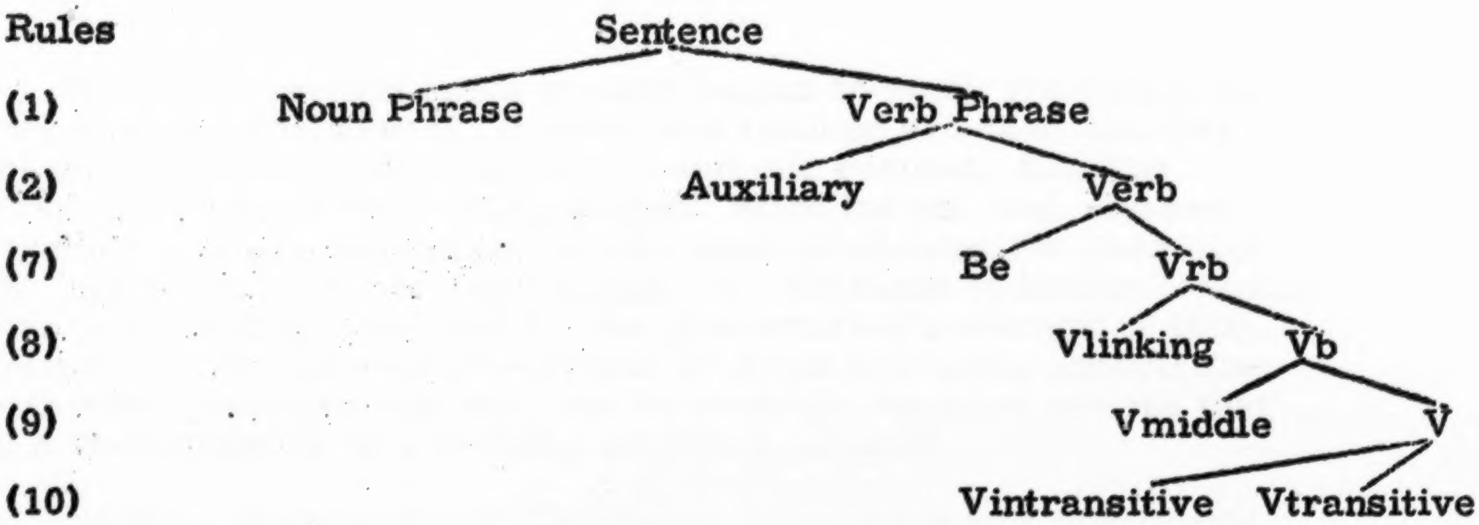
(4') The house stands there majestically.
(5') The house struck the tree forcefully.

Thus, in a number of formal ways, the words that we want to call "Verb" in these sentences are strikingly different from one another. And it is not just single words that are in question, for in each sentence, except (1), the verb is only one member of a set of verbs: besides seem (2), there is appear, look, remain, stay, turn, taste, etc.; besides have (3), there is cost, lack, weigh, etc. and so on.

Given the general complexity of language, it is probably impossible to establish a comprehensive and useful definition of the notion "verb in English," even for the five main subsets of verbs that occur in the preceding examples.

But we may be able to formulate our rules so that in one of the first general rules a category "Verb" will be introduced. In subsequent rules, this very large category (or class or set) will be broken down into more precise verb classes (subsets), such as Linking, Middle, Transitive, Intransitive, and so on. The breakdown might look like this in tree form:

See following page.



Note that the large category *Verb* (Rule 7) breaks into subsets *Be* and *Vrb* (all verbs other than *Be* whose unique characteristics put it into a separate subclass at this point.) Rule 8 then divides *Vrb* into subsets of *Linking* and *Vb* (all verbs left after the linking verbs are placed in a special group.), etc.

We will then test our rules by using them to derive sentences. If our rules are correctly formulated, it will turn out that any lexical item (a particular word, like *run*) that we can trace back to the symbol "Verb" will be "an *English* verb." The notion "verb in English" will thus be defined by a correct formulation of the rules, and it will be precisely that *formal* definition sought by the earlier grammarians. All that our rules have done is to make very clear and explicit what we felt all along to be true: that there is a type of word that we would very generally call a "verb," but also that there are different kinds of "verbs"--similar in some ways, but different in others. By careful formulation of rules based on the behavior of the various verb types, we can capture the sense of set and subset that we feel to exist in this area. The same thing will take place with Noun, Adverb, and Adjective.

GRAMMATICALITY

When the seventh grade student begins to study grammar, he may find that the routine, school, and teacher are new, but that the subject to be studied is, in at least one respect, familiar. Ever since he started putting sounds, word forms, and phrases together to make sentences, he has been developing his grammar. By "grammar" we mean two things: 1. the kinds of human behavior that produce language, and 2. the grammarian's account of that behavior. Our seventh grader has no doubt had some experience with what grammarians say, but he probably does not realize that in a real sense he is a walking grammar himself.

Various Approaches to Grammar. The teacher's task would be simple if there were only one description and explanation of our language that all could agree upon. Such is not the case, however, and confusion over deciding what grammar to teach may cause teachers to regard the whole subject as irrelevant. The leading contenders in the grammar conflict are the traditionalists and the structuralists, both of whom offer fairly complete methods of grouping facts about the English language while leaving much unexplained. The teacher is confronted with the problem of choosing between two analyses of his students' grammar, neither of which seems to fit very well.

Traditional grammar, modeled as it is after Latin grammar, fails to account for the uniqueness of English. It offers explanations of distinctions that are not made in English and frequently prescribes a single form where there obviously is no rigid standard. Although it does a satisfactory job of describing the language, traditional grammar relies upon our intuitive sense to give rationality to its often inaccurate explanations of language.

Structural grammar, a relatively new system, employs information brought to language study by historical grammarians, field anthropologists, and phoneticians. Its great contribution lies in its accurate observation of language. Definitions and rules are derived not from meaning or a sense of correctness, but from phonological (sound), morphological (form), and syntactical (structural) patterns. The structuralist's lack of concern over what *should be* rather than what *is* frees the teacher from having to make moral pronouncements about language usage--a significant advantage. However, because it fails to account for most English sentences beyond the very simplest, the value of structural grammar, too, is limited.

To sum up briefly, traditional grammar, although offering an adequate description of the language, is so bound up with how English *should* work that it fails to explain how English *does* work. Structural grammar offers a valuable system of classifying information about language but is not rigorous enough to account for most of the complexities in English.

The program of grammar advanced here will make use of the excellences of the two systems just mentioned, but will incorporate modifications of the language theory set forth in Noam Chomsky's book Syntactic Structures.[1] This is sometimes called transformational grammar. What is attempted is a generative grammar deductively derived so that a formal set of rules giving a rigorous account of English syntax is produced.

The Task of the Linguist. The transformationalists conceive that the grammar of a language not only describes the language as it is, but also shows how the sentences of that language are produced. The task of the linguist is to separate the grammatical from the ungrammatical, by studying the structure of the grammatical sequences, and thus to identify the grammaticality of the language--that knowledge possessed by native speakers of a language which enables them to produce the sentences of the language, and to recognize sentences they have never seen or heard. The grammar, then, is a set of rules which can "produce" all the sentences of a language but which will not produce any non-grammatical sequences. In other words, it explains the relations of the various elements of a grammatical sentence in formal terms so as to account for all of the so-called grammatical sentences of the language.

Grammar "is a complex system with many and varied interconnections between its parts."[2] How then is grammaticality determined? Breaks with English grammar can obviously occur in many ways. The following sentences are all ungrammatical but they are ungrammatical for different reasons.

1. The cricket which had been chirping (verb omitted)
2. Walked around the block the children (subject and verb transposed)
3. This pencil my best one is (verb and complement transposed)
4. Lincoln were a self-educated man (lack of subject-verb agreement)
5. I down fell (misplaced modifier)
6. He presented the whole class with a meanwhile (determiners occur only with nouns)

These sentences represent only a few of the kinds of distinctions made by users of the language. By exploring and categorizing these interconnections it is possible to generate a grammar.

---

[1] s' Gravenhage: Mouton and Co., 1957.

[2] Chomsky, op. cit., p. 60.

Characteristics of a Good Grammar. To be adequate--and usable--the grammar must be simple, economical, and complete. It must, in other words, be able to account for the various patterns of the language by a finite number of generalizations which cover the infinite variety of the sentences of the language. Obviously it would be impossible to analyze all the sentences of the language, which are infinite in number. But by analyzing a finite number of utterances, some of which are ungrammatical, it is possible to formulate a theory of grammar for all of the infinite number of unobserved utterances. The resulting grammar, if it is adequate, will account for all the grammatical and not any of the ungrammatical sequences.

Grammar Is Built In. In attempting to convey this concept, we should at the outset demonstrate to the student that he does have a knowledge of the grammar of his language, and that he uses it constantly without even thinking about it. (The sentences on page 1, and Exercise 1 of the Student Version are designed to illustrate this point.) Grammar is something built in, not learned. That is, the child acquires the grammar as he acquires the meaningful sounds and words of the language. It is a simultaneous process. This is not the same thing as learning a foreign language where there is a lag between acquiring the sounds and understanding their grammatical relationships. The student needs to know that when we study the grammar of English we are really only trying to understand why we behave linguistically the way we do-- why we say "Jane is practicing on the violin, but don't say "Jane the violin practicing." We are concerning ourselves with something which is intimately connected with every human aspect of our lives. We are examining the quality of our language--call it grammaticality--which produces the sentences of that language. And we do this, as the linguists do, by looking at sentences themselves, not just by learning rules about them.

It should be of interest to the student to realize that he need not know or examine all the sentences[3] of the language in order to understand how it works. Indeed, even the linguist himself could not do that, and does not, as was pointed out earlier. Let the student realize that the set of grammatical sentences is infinite and that the set of sentences he uses is a subset of that infinite set. As a native speaker, his experience with the language will enable him to produce and to understand an indefinite number of sentences just as his knowledge of and experience with the theory of multiplication enables him to produce and understand an indefinite number of multiplication problems. He doesn't need to work out all the possible problems in order to understand the theory. On the basis of a limited number of rules, the student of mathematics can describe an infinite number of individual mathematical relationships. Call the rules of mathematics the grammar of mathematics. Finite in number, they can project the infinity of mathematic relations. Similarly it is possible on the bases of a limited number of utterances

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[3] By sentence we mean any utterance accepted as such by the native speakers of the language. We will attempt later to define a sentence through the analysis of its parts and of its history.

(grammatical sentences) to construct rules which project the infinity of a language. (You may make use of Exercise 2 of the Student Version to enforce this notion.)

Grammar Doesn't Depend on Meaning. Next, it is possible to demonstrate to the student that the grammaticality of the language is not dependent on the semantic nature of the language. This is not to say that semantics is unrelated to the development of grammatical sentences. It is to say that it is difficult, if not impossible, to construct an adequate grammar on semantic grounds. Every speaker of the language would recognize that "'Twas brillig, and the slithy toves/ Did gyre and gimble in the wabe" is an English sentence, but none could say what it means, if indeed it means anything. It is possible to argue that "Hortense astounded the egg" is ungrammatical on the grounds that it is nonsense; one can't astound eggs. But to formulate a rule of grammar to cover such eventualities would mean formulating an infinite number of rules applyting to individual cases about which nominals can follow which verbs. However, it is possible to formulate a single general rule which would specify that verbs like astound, please, terrify, astonish, frighten, and surprise always take an animate object. Thus, in the interest of economy, simplicity, and generality (without which it is impossible to construct a usable grammar) the semantic approach must be ruled out. (Exercises 3 and 4 of the Student Version will help emphasize that the grammar doesn't depend on the meaning.)

Grammar Does Not Depend on High Order of Frequency. It is also possible to domonstrate that grammaticality is not dependent on the frequency with which a given sequence occurs in the language. It is possible to imagine many sequences of words which have never been produced before. For example:

1. Fat flabby parsons craftily consider their reputations.
2. Fat the parsons flabby consider their craftily reputations.
3. The cheerleader saw the long, dark, twisted, humorous, slinky informative poster.
4. The halfback running sideways with purple blotches clinging to the drooping ball.

It is doubtful that any of the utterances have been made before. Yet two of them (1 and 3) are grammatical English utterances. The other two are not. The fact they have never occurred before has nothing to do with their grammaticality. Similarly, we can show the student that many utterances which have a high statistical occurrence, such as "She loves me not," are still not grammatical utterances of English.

The awareness of some of these facts of what does and does not constitute grammaticality in English should produce in the student a lively interest in exploring the problem of what it is that accounts for the grammaticality of our language and lead directly to the discussion of the first steps in constructing an adequate grammar--a knowledge of the kernel sentence.

EXERCISES

The exercises in this section are primarily for the purpose of getting the pupils to begin to think about the sentence and to wonder what it is.

Sentences: Page 1
The desired answers are 1, 4, 6, 7, and 11. If students disagree on classification of some sentences (such as 2), you may need to remind them of the levels of grammaticality discussed in the unit of Varieties of English.

Exercise 1: Page 2 If you are using this unit in a grade beyond the 7th you may find this exercise and the next too easy for above average students. The sentences produced by the students may vary. By comparing the different answers you might call attention to the flexibility and restrictions of grammatical English sentences. For example, because of subject-verb agreement restrictions, group 4 can only produce "Spinach gives you vitamins," but group 3 offers several possibilities:

> The new boy could not find his class.
> His class could not find the new boy.
> The boy could not find his new class.

Exercise 2: Page 3
You may wish to compile the combinations suggested by the students in order to show them that a finite number of words may produce an indefinite number of sentences, many of which have not previously been spoken or written.

Exercise 3: Page 4 (This exercise is too hard for below average students.) Sentences 1, 2, 4, 6, and 7 are grammatical English sentences.

Exercise 4: Page 4
Students' sentences will obviously vary. But a discussion of the question, "How do you know where to place nonsense words in a sentence?" could make them aware that nonsense words resemble English words in form (with todded used as a verb, quinful an adjective, etc) and that they follow the normal word order of English sentences.

Exercise 5: Page 5
All these groups have some meaning, but only 6 and 7 are also grammatical English sentences. (Some students may consider 8 grammatical. You may wish to ask them to explain under what circumstances it would be grammatical.)

Students will not all agree on which sentences are grammatical English sentences. Some, such as 2, 3, and 5, are wrong in any situation;

others (8) depend on context. You might ask students to explain what is wrong with the ones they mark ungrammatical. For a helpful review students could also explain what is wrong with the nongrammatical sentences on page 1. They should catch obvious errors, such as the faulty word order in 2, 8, and 10 on page 1; and the incorrect word forms, such as quietly with the determiner a in 12, and these memory in 13, etc. A look at 6 as grammatical compared with 5 as nongrammatical might also reinforce the notion of grammaticality. It is important not to be dogmatic about these answers. At this point we are trying to arouse curiosity about the language, not come up with hard and fast rules.

THE ENGLISH SENTENCE

True or false?

(1) Five is not an uneven number. #
(2) Five is not an even number.
(3) Five is an even number.

Most speakers of English (provided, of course, they know the arithmetic meanings of 'even' and 'uneven') respond to (3) immediately, but (1) and (2) make them uneasy. They are familiar with this kind of foolery from their school examination days. But harassed into giving an answer, they would probably proceed to the correct solution by first finding the truth values of the positive statements underlying (1) and (2) and then negating these. That is, 'Five is an even number' is false; therefore, 'Five is not an even number' is true.

In this case, where the user of the language is not only asked to understand a sentence, but is also requested to give a further answer on the basis of his understanding, the process by which he proceeds to the answer is often laid bare; but even though it is not often that we see the process so clearly, it seems likely that the understanding of any sentence takes place in somewhat the same fasion; that is, a person receives the sentence, codes it back into a basic sentence plus a number of transformational changes: for example,

(4) Was he hit by the truck?
(5) The truck hit him + passive + yes or no question.
(He was hit by the truck.)
Was he hit by the truck?)

Much of the grammar that follows is built on the distinction between kernel (or basic) sentences and transformed (or derived) sentences. Therefore it is of prime importance that you have this basic distinction in mind. A kernel sentence can be defined most easily as a simple active declarative sentence (using that term in its usual grammatical sense), completely without adjectival modification (except in the predicate adjective following Be and the linking verbs), without compound subjects or objects, etc. Only in the Verb Phrase of the kernel sentence will there be any complexity--running from one extreme in "He should have been going..." to the other in "He goes...." In particular, no sentence is a kernel if it can itself be derived from a simpler sentence or sentences. The kernel sentence is the lowest common denominator of sentencehood in English. The following sentences are kernel sentences:

(6) The train hit the blockade.
(7) The girl is tall.
(8) The teacher should have been giving the exam.

#In this and the following units, example sentences are numbered in order to make cross reference easier.

(9) Birds sing.
(10) Man seems inhuman.

The following are not kernels for the reasons stated after each example:

(11) The tall boy is angry. [Contains an adjective, other than the predicate adjective; the result of embedding "The boy is tall." in "The boy is angry."]
(12) The tree was hit by the automobile. [Is a passive; derived from "The automobile hit the tree."]
(13) Was the man young? [Is a question, not a declarative sentence; derived from "The man was young."]
(14) The man and woman ran away. [Contains a compound subject; the product of "The man ran away." and "The woman ran away."]
(15) The boy won't talk tonight. [Is a negative; derived from the positive "The boy will talk tonight."]

Actually at some point what goes into the kernel or is excluded from it becomes a matter of some theoretical concern. For example, some grammarians have argued that both (15) and its positive form are kernels. They say that the negative, like various parts of the auxiliary, can be optionally present in any kernel sentence. Others understand negation to be the result of a transformation. The latter position is supported by the discussion that opened this section. Generalizing from that discussion, we can say that speakers of English have an easier time remembering exactly and commenting on the truth value of kernel sentences. This is not so easily done with derived sentences, even those of the very simplest kind, and it seems to be easier to remember positive than negative sentences.

The kernel sentences are then the simple, declarative sentences of the language. There is probably a finite number of kernel types. The remaining sentences of the language are formed from the kernels through simple and/or complex transformations. Whether or not a sentence is a kernel or transformed sentence is not a statistical matter; that is, the problem is not one of counting the sentences of the language. We can, however, make this important observation: it is the transformed sentences and not the kernels that are the real-life utterances of any language. On every level, even in the very youngest school child, most sentences used in day-to-day living are derived (sometimes in very complex ways) from kernel sentences. Nevertheless there is always beneath every transformed sentence a kernel or, indeed, a number of kernel sentences. For example,

(16) The blue house in which he lives was knocked down by the storm.,

is derived in the following fashion:

(17) The storm knocked down the house. $\xrightarrow{\text{passive}}$
(18) The house was knocked down by the storm.) $\Longrightarrow$
(19) The house was blue. $\}\Longrightarrow$

(20) The blue house was knocked down by the storm. } ⟹
(21) He lives in the house. }
(16) The blue house in which he lives was knocked down by the storm.

Again it is important to emphasize that this analysis of English is not being proposed merely because it is a convenient way in which to deal with the complexities of English. The point being made is rather more significant than that. It is exactly this: There is a psychological validity present in transformational grammar which supports the notion that the preceding analyses of English sentences are somehow right. A recent experiment makes this quite clear: the subjects were read a series of eight sentences, some of them kernels and some passive transforms, negative transforms, interrogative transforms, or combinations of these. For example, the sentences might have been as follows:

(22) Hasn't the girl worn the jewel?
(23) The typist has copied the manuscript.
(24) The machine was bought by the company.
(25) Hasn't a secretary been hired by him today?

The sentences were read at a slow but steady rate, and then the subjects were asked to write down as many and as much of the eight as they could recall. A number of syntactic errors were of course made in the recall process, but what is amazing is that there was a remarkably high incidence of mistakes that involved only a single transformational slip. Say, for example, that the sentence in question was (25); this can be coded into

(26) He has hired a secretary today.
(27) negative (He has not hired a secretary today.)
(28) passive (A secretary has not been hired by him today.)
(29) yes or no question (Hasn't a secretary been hired by him today?)

The subject when asked to recall this sentence was likely to come up with

(30) A secretary hasn't been hired by him today.

Presumably he coded the sentence back into the kernel but was able to work it through only two of the three transformations. Thus he was able to produce a sentence that was one transformation short of the original.

Consistent one-transformation misses of this sort support the notion that kernels and transformations are more than convenient theoretical primes. The kernels and the transformations are the grammar of the language and the mind.

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THE GRAMMAR: PHRASE STRUCTURE RULES

Introduction

Following are the phrase structure rules which will be covered in the seventh grade. They are also given in the linguistic symbols which we hope the student will become familiar with. Rules of this kind are known (in whatever discipline they are used) as rewrite rules: the symbol to the left of the arrow, the arrow itself being interpreted as an instruction: 'rewrite as'. The explanation of each symbol and its application is, of course, more fully developed in the student version, where the rule itself is not given until the student has been led inductively to anticipate it.

(1) Sentence---> NP + VP	Sentence---> Noun Phrase + Verb Phrase
(2) VP---> Aux + Verb	Verb Phrase---> Auxiliary + Verb
(3) Aux---> Aux$_1$ (Aux$_2$)	Auxiliary---> Auxiliary$_1$ (Auxiliary$_2$) [Parentheses indicate an optional element.]
(4) Aux$_1$---> Tns (M)	Auxiliary$_1$---> Tense (Modal)
(5) Tns---> $\begin{Bmatrix}\text{pres}\\ \text{past}\end{Bmatrix}$	Tense---> $\begin{Bmatrix}\text{present}\\ \text{past}\end{Bmatrix}$ [Braces { } signify that a kernel has one but never both elements.]
(6) Aux$_2$---> (have + en) (be + ing)	Auxiliary$_2$---> (have + en) (be + ing)
(7) Verb---> $\begin{Bmatrix}\text{Be + Pr}\\ \text{Vrb}\end{Bmatrix}$	Verb---> $\begin{Bmatrix}\text{Be + Predicate}\\ \text{Vrb}\end{Bmatrix}$ [Vrb includes all verbs except Be.]
(8) Vrb---> $\begin{Bmatrix}\text{Vlnk + Pr}\\ \text{Vb}\end{Bmatrix}$	Vrb---> $\begin{Bmatrix}\text{Vlinking + Predicate}\\ \text{Vb}\end{Bmatrix}$ [Vb indicates all verbs but Be and linking.]
(9) Vb---> $\begin{Bmatrix}\text{Vmid + NP}\\ \text{V (Man)}\end{Bmatrix}$	Vb---> $\begin{Bmatrix}\text{Vmiddle + Noun Phrase}\\ \text{V (Manner adverb)}\end{Bmatrix}$

(10)	V---> $\left\{\begin{matrix}\text{Vin}\\ \text{Vtr + NP}\end{matrix}\right\}$	V---> $\left\{\begin{matrix}\text{Vintransitive}\\ \text{Vtransitive + Noun Phrase}\end{matrix}\right\}$
(11)	Pr---> $\left\{\begin{matrix}\text{Adj}\\ \text{NP}\\ \text{Loc}\end{matrix}\right\}$	Predicate---> $\left\{\begin{matrix}\text{Adjective}\\ \text{Noun Phrase}\\ \text{Adverb of Location}\end{matrix}\right\}$
(12)	Man---> Adj + ly	Manner adverb---> Adjective + ly
(13)	NP---> T + N + N^o	Noun Phrase---> Determiner + Noun + Number
(14)	N---> $\left\{\begin{matrix}\text{Ncnt}\\ \text{Nm}\end{matrix}\right\}$	Noun---> $\left\{\begin{matrix}\text{Countable Nouns}\\ \text{Mass Nouns}\end{matrix}\right\}$
(15)	Ncnt--> $\left\{\begin{matrix}\text{Nan}\\ \text{Nin}\end{matrix}\right\}$	Noun Countable---> $\left\{\begin{matrix}\text{Animate Nouns}\\ \text{Inanimate Nouns}\end{matrix}\right\}$
(16)	Nan---> $\left\{\begin{matrix}\text{Nhum}\\ \text{Nnon}\end{matrix}\right\}$	Noun Animate--> $\left\{\begin{matrix}\text{Human Nouns}\\ \text{Nonhuman Nouns}\end{matrix}\right\}$
(17)	N^o---> sing in the context Nm + ________	Number of Nouns---> singular in the context Noun Mass + ________
(18)	N^o---> $\left\{\begin{matrix}\text{sing}\\ \text{plur}\end{matrix}\right\}$	Number---> $\left\{\begin{matrix}\text{singular}\\ \text{plural}\end{matrix}\right\}$

In this quite simple grammar of English the rules are for the most part 'context-free', which means, for example, that NP (noun phrase) is rewritten as *T* + *N* + $\underline{N}^{o}$ (determiner + noun + number) wherever and whenever it appears in a string of symbols. Only (17) is context-sensitive: $\underline{N}^{o}$ (number of noun) must always be singular if it immediately follows *Nm* (any mass noun).

Abstractly speaking then, a rewrite rule takes the following form:

X a Y ---> X b Y

In other words, X. . . Y describes a context and *a* is the element rewritten as *b*: that is, Rule (3) directs us to rewrite 'NP + Aux + Verb' as 'NP + Aux_1 + Aux_2 + Verb. In this example NP = X; Verb = Y; Aux = *a*; Aux_1 + Aux_2 = *b*.

The rules are applied in order as many times. . . as are necessary. If the string after the application of (10) is NP + Vtr + NP, (13) must be applied twice, once to the subject (NP) and once to the object (NP). A final or terminal string will consist entirely of symbols no one of which is found to the left of an arrow. A terminal string consists then entirely of terminal symbols as a result of Rules (1) - (18). Each terminal symbol that is a lexical symbol and not a grammatical symbol is further expanded as one of the lexical items for which it stands. For instance *Nhum* may be *boy*.

It is important to note that each rule except the first is rewriting only a portion of the particular string, to be exact one element of the string, as it exists prior to the application of the rule. For example the kernel sentence "The boys have had the money." is the result of applying the rules in order. Thus each item is expanded one by one. The process leading to the string which represents this sentence would run as follows:

S The boys have had the money.

(1) NP + VP

(2) NP + $\underline{\text{Aux + Verb}}$

(3) NP + $\underline{\text{Aux}_1}$ + $\underline{\text{Aux}_2}$ + Verb

(4) NP + $\underline{\text{Tns}}$ + $\underline{\text{Aux}_2}$ + Verb

(5) NP + $\underline{\text{pres}}$ + Aux$_2$ + Verb

(6) NP + pres + $\underline{\text{have + en}}$ + Verb

(7) NP + pres + have + en + $\underline{\text{Vrb}}$

(8) NP + pres + have + en + $\underline{\text{Vb}}$

(9) NP + pres + have + en + $\underline{\text{Vmid + NP}}$

(13) $\underline{\text{T + N + N}^{o}}$ + pres + have + en + Vmid + NP

(13) T + N + N^{o} + pres + have + en + Vmid + $\underline{\text{T + N + N}^{o}}$

(14) T + $\underline{\text{Ncnt}}$ + N^{o} + pres + have + en + Vmid + T + N + N^{o}

(14) T + Ncnt + No + pres + have + en + Vmid + T + $\underline{\text{Nm}}$ + N^{o}

(15) T + $\underline{\text{Nan}}$ + N^{o} + pres + have + en + Vmid + T + Nm + N^{o}

(16) T + $\underline{\text{Nhum}}$ + N^{o} + pres + have + en + Vmid + T + Nm + N^{o}

(17) T + Nhum + N^{o} + pres + have + en + Vmid + T + Nm + $\underline{\text{sing}}$

(18) T + Nhum + $\underline{\text{plur}}$ + pres + have + en + Vmid + T + Nm + sing

The symbols which stand for lexical items are then rewritten as lexical items.

T + Nhum + plur + pres + have + en + $\underline{\text{have}}$ + T _ Nm + sing

$\underline{\text{The}}$ + Nhum + plur + pres + have + en + have + T + Nm + sing

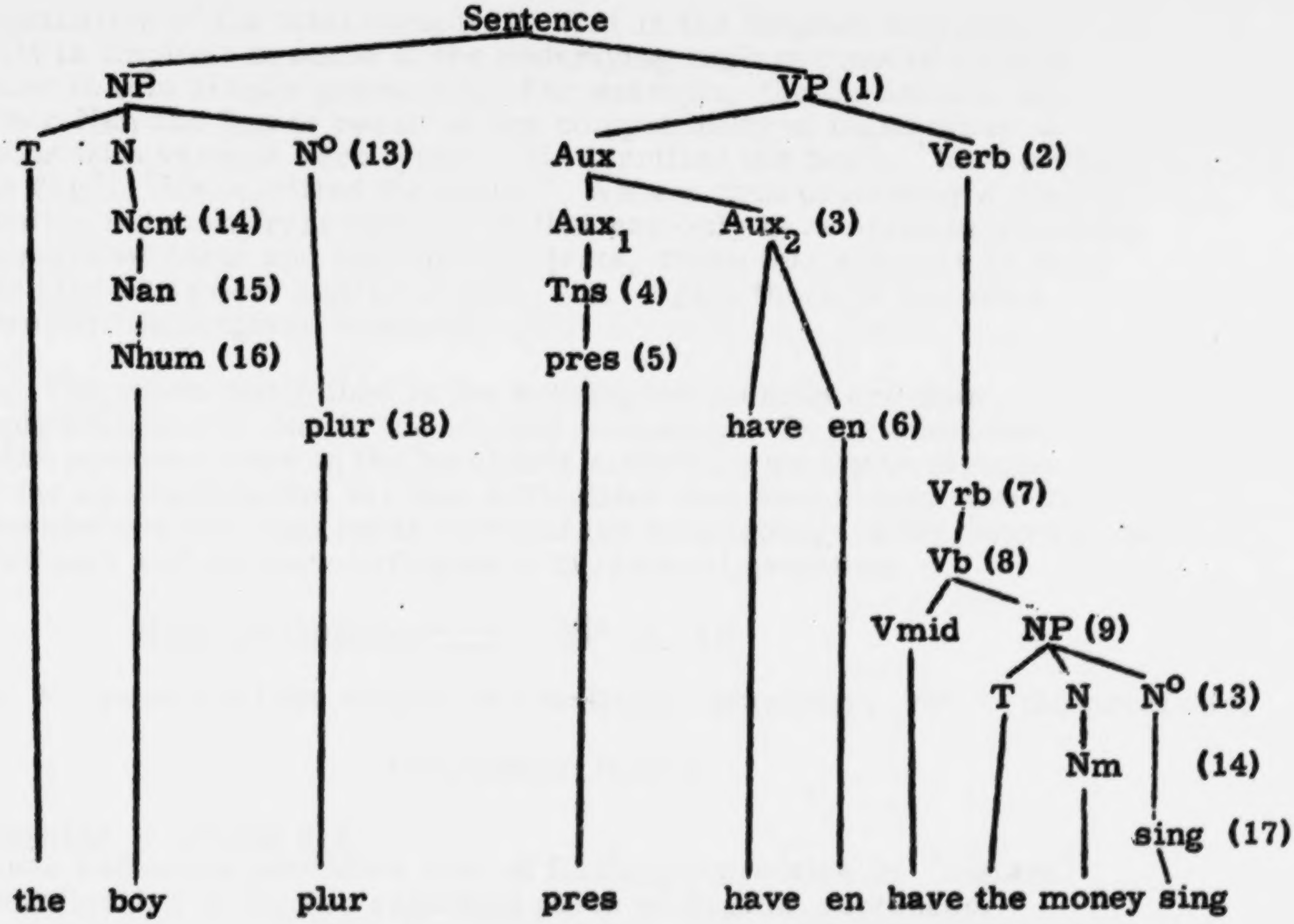
The + Nhum + plur + pres + have + en + have + $\underline{\text{the}}$ + Nm + sing

The + Nhum + plur + pres + have + en + have + the + $\underline{\text{money}}$
+ sing

The + $\underline{\text{boy}}$ + plur + pres + have + en + have + the + money +
sing

(Note: the numbers in parentheses of course refer to the rule being applied in the particular operation.)

The generation of a sentence (more accurately, of the terminal string underlying the sentence) can be seen more revealingly in a tree diagram of the following type:


Sentence
NP
VP (1)
T
N
N° (13)
Aux
Verb (2)
Ncnt (14)
Aux1
Aux2 (3)
Nan (15)
Tns (4)
Nhum (16)
pres (5)
plur (18)
have
en (6)
Vrb (7)
Vb (8)
Vmid
NP (9)
T
N
N° (13)
Nm
(14)
sing (17)
the boy plur pres have en have the money sing

Obligatory transformations and phonological rules that specify such things as the exact nature of pres, etc., will release the kernel sentence in question: "The boys have had the money."

The application of the rules is thus a purely automatic and mechanical matter. And the construction of a tree diagram is a graphic reflection of the rules. If only grammatical sentences can be produced with the rules and if no ungrammatical sentences result from them, then all that is known is that the rules are correctly formulated. But that is all that is known, this being in itself not very important. For insight into the language is only reached through explanation of the rules or through discovery of the rules. Thus it is that in the lessons that follow, we have as far as possible tried to lead the student into discovering the rules, or failing that at least to understand them.

The very bright students will not only discover the rules rather quickly, but they will also begin to discover the basis for the rule-making and to predict subsequent rules, perhaps beyond the limitations placed in the above seventh grade grammar. For them some discussion of the reasons for ordering the rules will be pertinent. Why, for example, isn't NP rather than VP expanded in rule 2? Why does (17) precede (18)? What justification is there for expanding (7), (8), (9), (10), and (11) in that order? Are all the rules necessarily ordered? And so on.

There should, of course, always be a frank admission whenever the question arises, that these few rules do not even approach a full explanation of the total complexity that is the English language. This is implicit in some of the underlying explanations of certain rules in this simple grammar. For example, the distinction between Nan and Nin is based on the compatibility of these types of nouns with various verb types: "He terrified the boy"; "he terrified the dog"; "He terrified the table." We are thus predicting a distinction between transitive verbs that can only have animate subjects, animate subjects and inanimate objects, those that are free to have any kind of subject and/or object, etc. Again there is material here for the brighter students.

The rules that follow in the subsequent lessons are then explicated one by one in the student materials. In the additional notes provided here in the teacher's materials we try to discuss as far as possible the various difficulties that may arise. Certain correlations are also made between the terminology of transformation grammar and the terminologies of traditional grammar.

Rule (1) Sentence---> NP + VP

NP = (generally) the subject of traditional grammar; VP = the predicate.

Exercises: Rule 1

Exercise 1: Pages 6-7
These sentences provide a kind of flashcard practice in "instant" identification of the two essential parts of English sentences.

Exercise 2: Page 8 (Ask your students to cross out "sentence" at the end of the first line of directions.) Elementary as this step seems, students here begin their initial association of symbols with the two essential parts of the kernel sentence. This is, of course, an obligatory rule which applies to every kernel.

Exercises 3 and 4: Pages 8-9
Because answers will vary considerably, students probably would enjoy hearing the sentences others write. This provides an opportunity for you to reinforce the notion that one essential part may be much longer than the other.

Exercise 5: Page 10
1. The baby + cries.
2. The children + play.
3. The man + lands the fish.
4. The girl + writes.
5. The clown + kicks the mules.
6. The child + sleeps.
7. The boys + find the dog.
8. The butler + closes the door.
9. The maid + breaks the cup.
10. The fish + leaps.

Exercise 6: Page 10-11
Sentences like 3, 4, and 5 in A are likely to cause some problems for the student trying to draw the vertical line in the proper place. The

previous discussion of the kernel sentence should at least reveal why the difficulty arises. For example, "The friendly kittens next door climbed the thorny tree.", might be divided by some students after kittens rather than after door. This division is understandable because (iii) is the result of embedding (ii) in (i):

(i) The friendly kittens climbed the thorny tree.
(ii) The kittens are next door.
(iii) The friendly kittens next door climbed the thorny tree.

Next door is thus the remnant of a VP of an embedded kernel, one that had gone into the making of the derived sentence. Rule (2) will clarify that the first element of VP must be an Aux or lexical verb. It is very important at this point to remember that your students do not yet know what elements actually occur in a kernel sentence. Hence, you should not insist on what you know will later be revealed by the phrase structure rules. You should, instead, try to get them to intuitively eliminate what they feel is not essential to a grammatical sentence. What you are trying to do is get them to see that underneath a complex sentence is a simple base sentence. You aren't trying to define that base sentence. Being able to distinguish between optional and obligatory elements is not really possible here for they have as yet no basis for making such a choice, nor is it necessary. But you will probably find that most students will reduce these expansions to the obligatory elements of a kernel sentence. A few may wish to include some of the optional elements. Your aim, then, is to try to get them to cross out items in a way similar to the following, realizing that so far they are working intuitively and that there will be differences of opinion. The sentences offered in this exercise become progressively more difficult. Though you know that red in "The red house" cannot occur in a kernel, you should only try to get the student to see that red is not essential to the grammaticality of the sentence. The items which will be designated as optional items as we develop the phrase structure rules are in parentheses. They are the ones which will probably cause the most discussion.

A. 1. The ~~soccer~~ player | broke the ~~library~~ window.
The player broke the window.
2. The ~~angry~~ player | left the field (unexpectedly).
The player left the field (unexpectedly.)
3. The man ~~with the cart~~ | is the mailman.
The man is the mailman.
4. The man ~~who is pushing the cart~~ | is the mailman.
The man is the mailman.
5. The ~~friendly~~ kittens ~~next door~~ | climbed the thorny tree.
The kittens climbed the tree.
6. The ~~swaying~~ dancers | looked sleepy.
The dancers looked sleepy.
7. The door ~~of the gym~~ | is open.
The door is open.
8. The ~~limping~~ man | is a ~~good~~ carpenter.
The man is a carpenter.

9. The student ~~with the highest score~~ | wins a radio.
   The student wins a radio.
10. The ~~ninety-nine~~ bottles | fell (down.)
    The bottles fell (down).
11. The bottles ~~hanging on the wall~~ | fell (down).
    The bottles fell (down).
12. The bottles ~~which are hanging on the wall~~ | will fall (down).
    The bottles will fall (down).

B. 1. Harold | slept (in the ~~soft~~ hay) (until morning).
   Harold slept (in the hay) (until morning).
2. ~~After dinner~~ the gypsy band moved the ~~colorful~~ wagons.
   The band moved the wagons.
3. The ~~beautiful~~ girl | ~~softly~~ sang a ~~Spanish~~ lullaby.
   The girl sang a lullaby.
4. The person ~~who sees this~~ | has some ~~dangerous~~ information.
   The person has some information. [Some is a determiner.]
5. The table ~~at the back of the room~~ | has a display ~~of rare fossils~~.
   The table has a display.
6. The fish ~~he caught~~ | weighed a pound ~~after being cleaned~~.
   The fish weighed a pound.
7. The street ~~in front of the school~~ | is slippery (this morning.)
   The street is slippery (this morning).
8. ~~Just plain~~ water | is the ~~best~~ cleaner ~~for most things~~.
   Water is the cleaner.
9. The ~~old-fashioned~~ trolley | ~~finally~~ stopped ~~when someone pulled the emergency cord~~.
   The trolley stopped.
10. A ~~dirty~~ tramp ~~with a cane~~ | knocked (loudly) (on the ~~Smiths' back~~ door.)
    A tramp knocked (loudly) (on the door.)
11. A ~~dirty~~ tramp ~~who had a cane~~ | knocked (loudly) (on the ~~Smiths' back~~ door.)
    A tramp knocked (loudly) (on the door.)

C. The adjectival phrases included here make these sentences difficult. You may wish to assign them to above average students only.

1. A ~~shaggy~~ dog | watched the ~~long~~ line ~~of people~~.
   A dog watched the line.
2. The ~~huge polar~~ bear ~~from Alaska~~ | rattled the ~~iron~~ bars ~~of the cage~~.
   The bear rattled the bars.
3. A ~~slumber~~ party | is a ~~sleepless~~ gathering.
   A party is a gathering.
4. The box ~~holding the jewels~~ | fell (from the deck) (into the ~~muddy~~ stream)
   The box fell (from the deck) (into the stream).
5. The box ~~holding the jewels which the burglar had taken~~ | fell (into the ~~muddy~~ stream).
   The box fell (into the stream).

6. The part ~~I liked~~ | came last (in the program).
The part came last (in the program).
7. This book ~~about Chief Joseph~~ | included a history ~~of the Nez Perce Indians~~.
This book included a history.
8. The sabres ~~hanging behind the counter~~ | have ~~probably~~ been there (a long time).
The sabres have been there (a long time).
9. The detective ~~known for his great mind~~ | is the ~~famous~~ Sherlock Holmes.
The detective is (the) Sherlock Holmes. [Most students will want to remove the determiner the.]
10. Birds ~~of all sorts~~ | flew (to the refuge) (along the lake).
Birds flew (to the refuge) (along the lake).
11. The key ~~to the filing cabinet~~ | is in the room ~~where we had lunch~~.
The key is in the room.
12. The ~~lawyer's~~ request ~~for more time~~ | bothered the judge (immediately.)
The request bothered the judge (immediately).
13. ~~Only~~ the ~~very hardest~~ workers | will finish the ~~latest~~ assignment (by tomorrow.)
The workers will finish the assignment (by tomorrow).
14. The man | had walked a mile (every day).
The man had walked a mile (every day).

THE VERB AND ITS AUXILIARIES

These rules provide an analysis of the auxiliary (Aux) structure of kernel sentences:

(2) VP---> Aux + Verb

(3) Aux---> Aux_1 + (Aux_2)

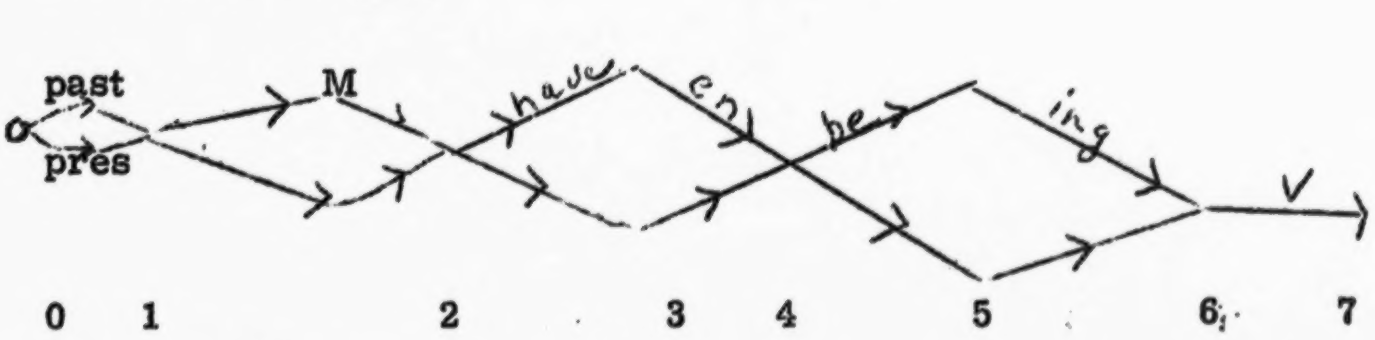
(4) Aux_1---> Tns (M)

(5) $\text{Tns} \dashrightarrow \begin{Bmatrix} \text{pres} \\ \text{past} \end{Bmatrix}$

(6) Aux_2---> (have + en) (be + ing)

(a) Aux as it is here expounded will be found in every English sentence, for every English sentence contains at least tense. Other parts of the Aux (see rules (3) to (6) are optionally present--( ) indicating that a particular element may but need not be present in a given English sentence for it to be grammatical. { } indicate that one and only one of the enclosed items can be chosen.

(b) The following diagram, known technically as a finite state diagram, should clarify the dependencies present for the different elements of the Aux:



A grammatical Aux is produced by beginning at state 0 and, following the direction of the arrows, switching freely from state to state. A segment of the Aux is produced with each change. The only necessary conditions imposed are clearly that every VP have a tns (either past or pres) and a lexical verb. Thus, starting at 0, you must choose either past or present. Next you elect to choose M (= modal), but you may also elect not to choose it. You have a choice of choosing have (= the auxiliary have, not the lexical have), or not; but if it is chosen the necessity of choosing en (= the past participal marker) follows. That is, a past participle must follow the auxiliary have, just as a present participle must follow the auxiliary Be: thus the difference between "He is sleeping," and "He is interesting.", and the ambiguity of "They are eating apples."

(c) Notice that Aux does not contain the sequence of elements be + en necessary to produce the passive construction. There are several reasons for this. To begin with, not all verbs can be made passive: for example, "The boy had some money." can not be written "Some money was had by the boy." Of course it is true that not all verbs can appear in the progressive. (Have + en = perfect; be + ing = progressive): We can't write "He is knowing the answer." But this is more easily explained as a syntactic accident, somewhat like the similar situation on the phonological level of the language where "blik" is not an English word while brick is. "Blick" has possible phonological components for an English verb but for some reason is not one. (In contrast to flrp which under no circumstance could be an English word). That know, dislike, equal, etc, cannot appear in the progressive is an interesting observation that will have to be handled in a full grammar of English by means of a context-sensitive rule. at some later time in the grammar. The more powerful reason for eliminating the passive from Aux is that the passive is a derived sentence type. That is, "The boy started the fire." and "The fire was started by the boy." are related or synonymous in a way that "He starts the fire.", "He started the fire."; "He will start the fire." are not. The source of the be + en and the by of the passive structure is in the passive transformation itself, not in the kernel sentence.

(d) The list of modals given here is perhaps too short. Some speakers of English will use dare, ought, need, etc. ("He dare not do it." "He oughtn(')t do it.") These are, however, less likely to appear as modals in positive sentences in most American English dialects. Note also that should is the grammatical past of shall, would of will, might of may--grammatical past, though not necessarily semantic past. In the same way, ship is grammatically feminine, but semantically neuter.

Exercises: Rule 2

Exercise 1: Page 12

1. howled
2. painted
3. saw
4. flew
5. sank
6. painted
7. were opening
8. are
9. looked
10. cost

Exercise 2: Page 13

The notion that the root is the verb form to which we may always add ing provides a simple test for students to use in forming or recognizing root verbs: Can the form take ing?

A. 1. sing
2. call
3. make
4. fish
5. speak
6. have
7. sit
8. choose
9. burn
10. lead

B. 1. go
2. lie
3. buy
4. forget
5. wake

6. be [The ing test immediately eliminates am or are as the root verb here and in 10.]
7. drink
8. set
9. swim
10. be

Exercise 3: Page 14

(Ask your students to write form in the blank space at the beginning of line 2, paragraph 3 on page 13.)

verb = tense + root

1. had = past + have
2. goes = present + go
3. took = past + take
4. contains = present + contain
5. lost = past + lose
6. collects = present + collect
7. looked = past + look
8. is = present + be
9. caused = past + cause
10. volunteered = past + volunteer

Recognizing Tense: Page 15

sing-present
ran - past
followed - past

cook - present
write - present
saw - past

had - past
have - present
are - present

were - past
stole - past

Exercise 4: Page 15

Exercises 4 and 5 are designed to show students the difference between regular and irregular verb formations. Exercises in Rule (6) amplify this notion. Students may find a review of the spelling rules usually associated with the formation of the principal parts of verbs helpful at this point.

A. 1. painted
2. trampled
3. started
4. solved
5. ruled

6. dreamed
7. scattered
8. looked
9. obeyed
10. pitched

B. 1. turned
2. acted
3. dined
4. tried
5. surveyed

6. hummed
7. laughed
8. traveled
9. stirred
10. wrapped

Exercise 5: Page 15

A. 1. threw
2. chose

3. struck
4. froze

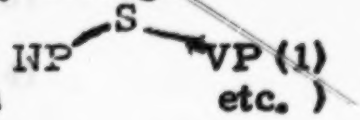
5. sold
6. had
7. did
8. brought
9. swung
10. broke

B. 1. ate
2. went
3. lay
4. hit
5. caught
6. shined or shone [The meaning of the verb shine determines which form is needed: "I shined his shoes."or "The stars shone last night."]
7. bought
8. fought
9. shook
10. was or were

Exercise 6: Page 13

catches
sweeps
eats
drinks
sleeps
cuts
sings
writes
drives
runs

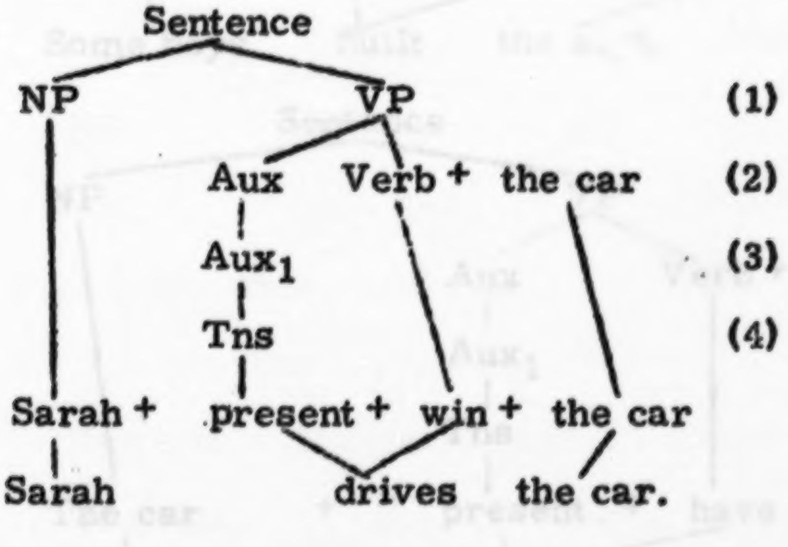
(The rule numbers were inadvertently left out of the diagram on p. 17. Show your students where they belong.



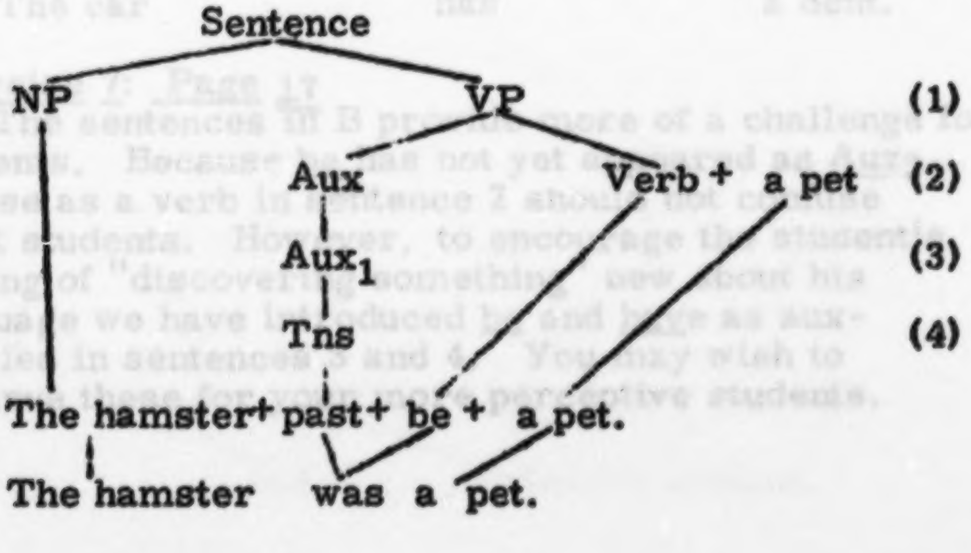
etc.)

Exercise 7: Page 17
All students should be able to diagram the sentences in Part A.

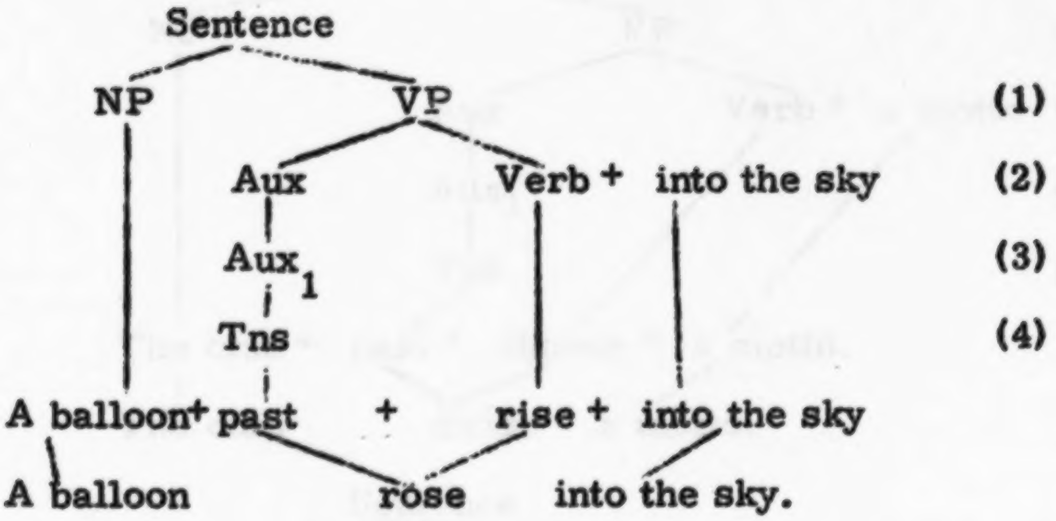
A. 1


Sentence
NP
VP
(1)
Aux
Verb + the car
(2)
Aux₁
(3)
Tns
(4)
Sarah +
present +
win +
the car
Sarah
drives
the car.

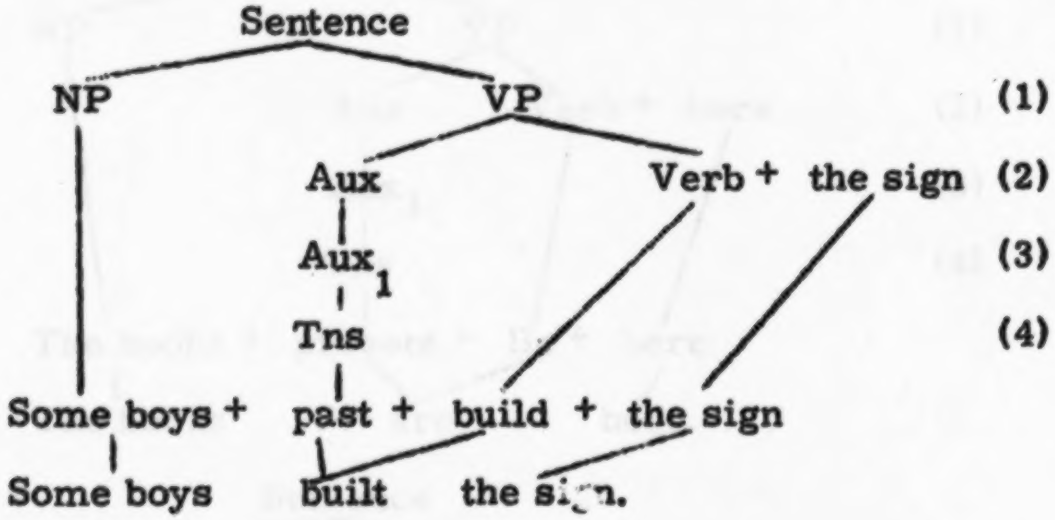
2.


Sentence
NP
VP
(1)
Aux
Verb + a pet
(2)
Aux₁
(3)
Tns
(4)
The hamster+ past + be + a pet.
The hamster
was
a pet.

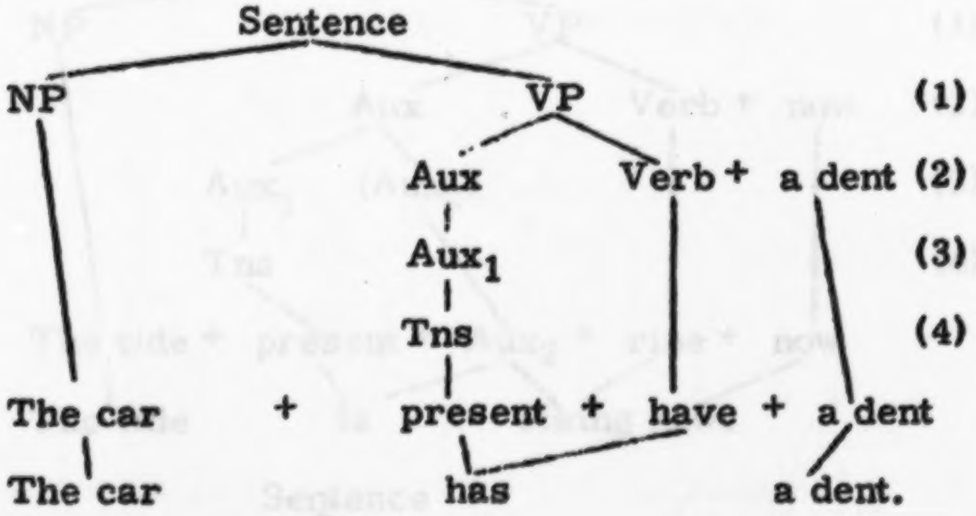
3.


Sentence
NP
VP
(1)
Aux
Verb + into the sky
(2)
Aux1
(3)
Tns
(4)
A balloon+ past + rise + into the sky
A balloon
rose
into the sky.

4.


Sentence
NP
VP
(1)
Aux
Verb + the sign
(2)
Aux1
(3)
Tns
(4)
Some boys + past + build + the sign
Some boys
built
the sign.

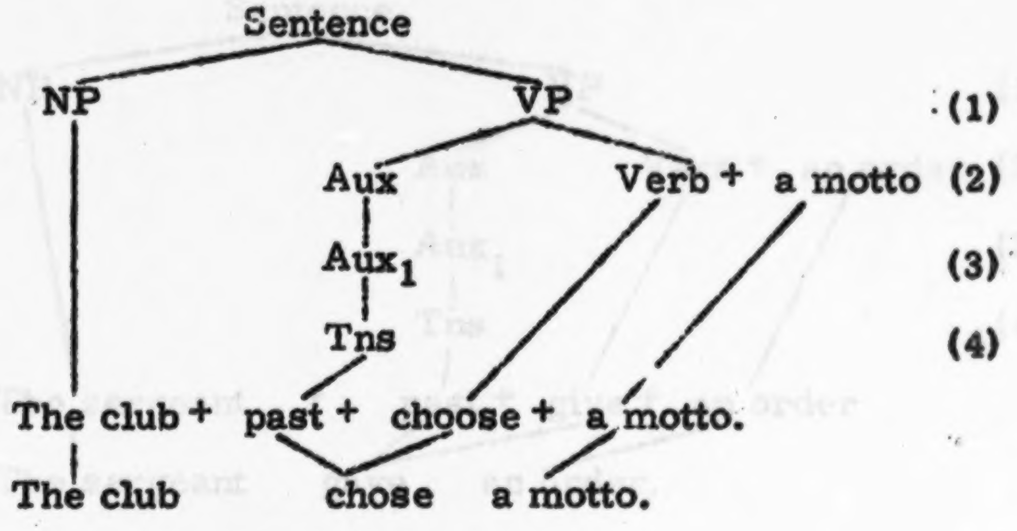
5.


Sentence
NP
VP
(1)
Aux
Verb + a dent
(2)
Aux1
(3)
Tns
(4)
The car + present + have + a dent
The car
has
a dent.

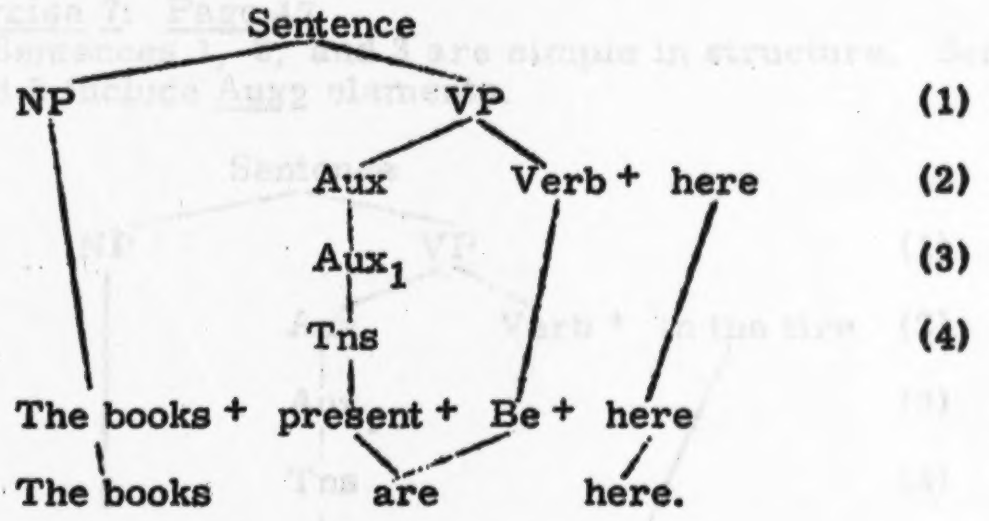
Exercise 7: Page 17

B. The sentences in B provide more of a challenge for students. Because be has not yet appeared as Aux$_2$, its use as a verb in sentence 2 should not confuse most students. However, to encourage the student's feeling of "discovering something" new about his language we have introduced be and have as auxiliaries in sentences 3 and 4. You may wish to reserve these for your more perceptive students.

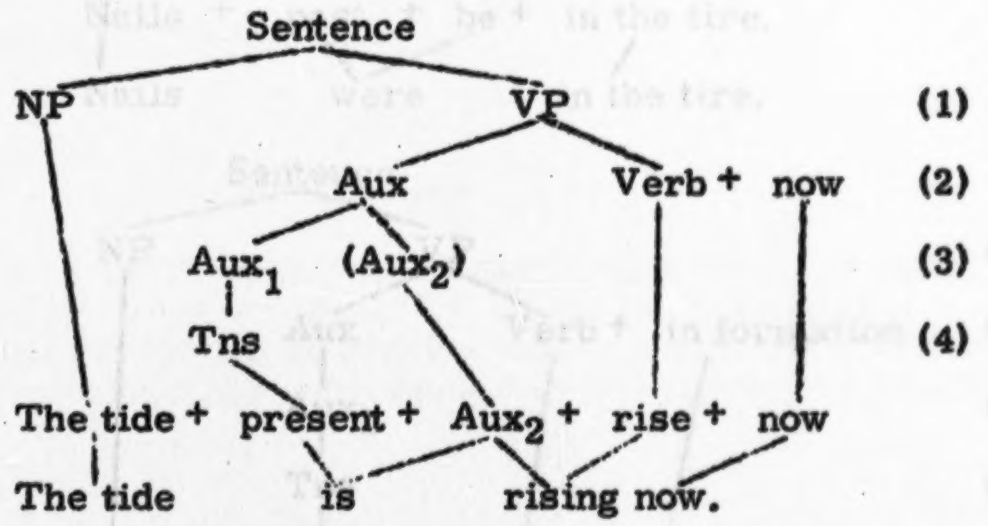
1.


Sentence
NP
VP
(1)
Aux
Verb + a motto
(2)
Aux_1
(3)
Tns
(4)
The club + past + choose + a motto.
The club chose a motto.

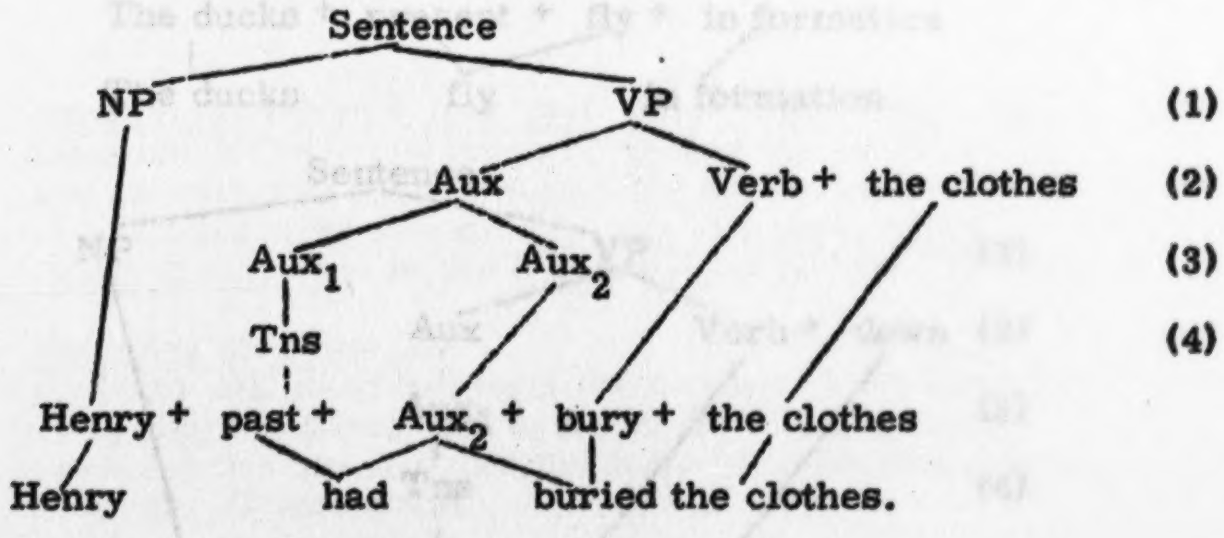
2.


Sentence
NP
VP
(1)
Aux
Verb + here
(2)
Aux_1
(3)
Tns
(4)
The books + present + Be + here
The books are here.

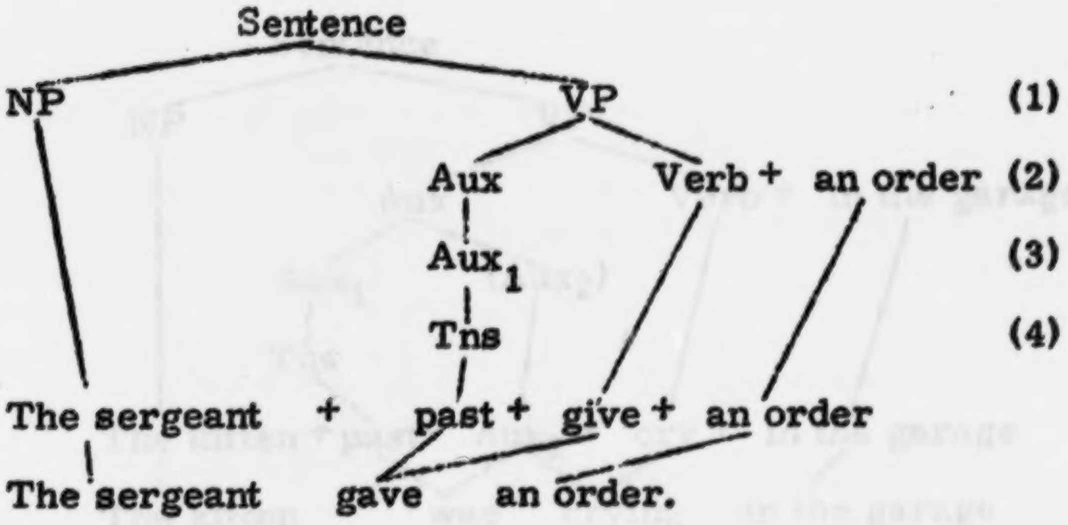
3.


Sentence
NP
VP
(1)
Aux
Verb + now
(2)
Aux_1
(Aux_2)
(3)
Tns
(4)
The tide + present + Aux_2 + rise + now
The tide is rising now.

4.

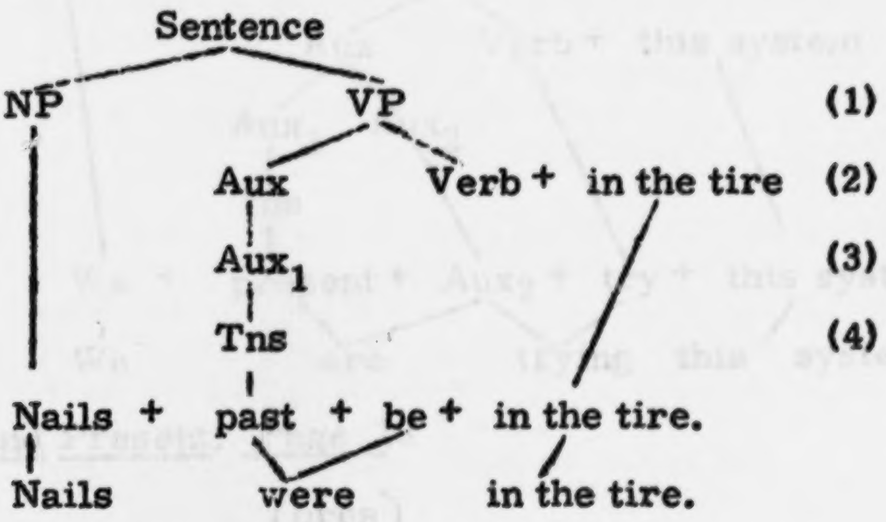

Sentence
NP
VP
(1)
Aux
Verb + the clothes
(2)
Aux_1
Aux_2
(3)
Tns
(4)
Henry + past + Aux_2 + bury + the clothes
Henry had buried the clothes.

5.

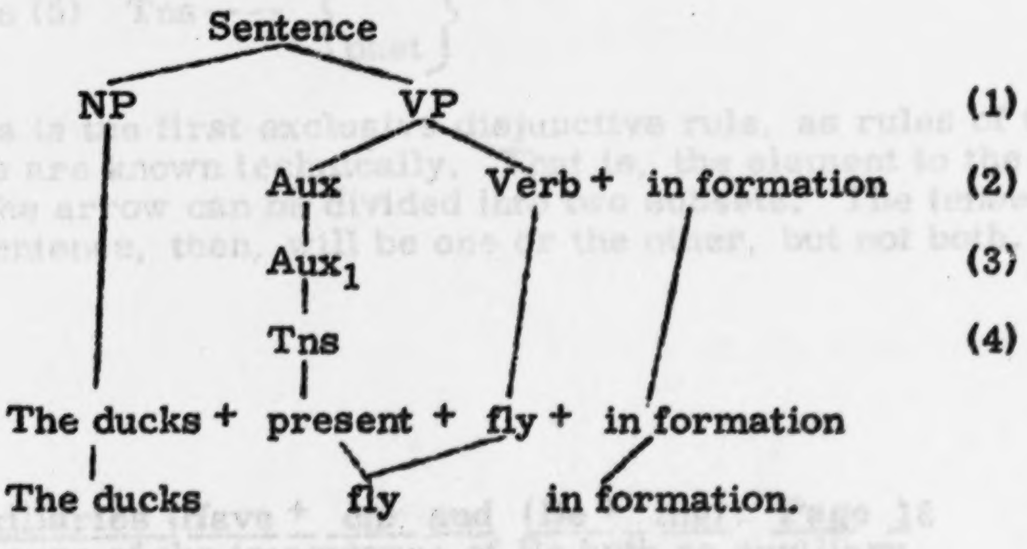

Sentence
NP
VP
(1)
Aux
Verb + an order
(2)
Aux1
(3)
Tns
(4)
The sergeant + past + give + an order
The sergeant gave an order.

Exercise 7: Page 17
C. Sentences 1, 2, and 3 are simple in structure. Sentences 4 and 5 include $\underline{Aux_2}$ elements.

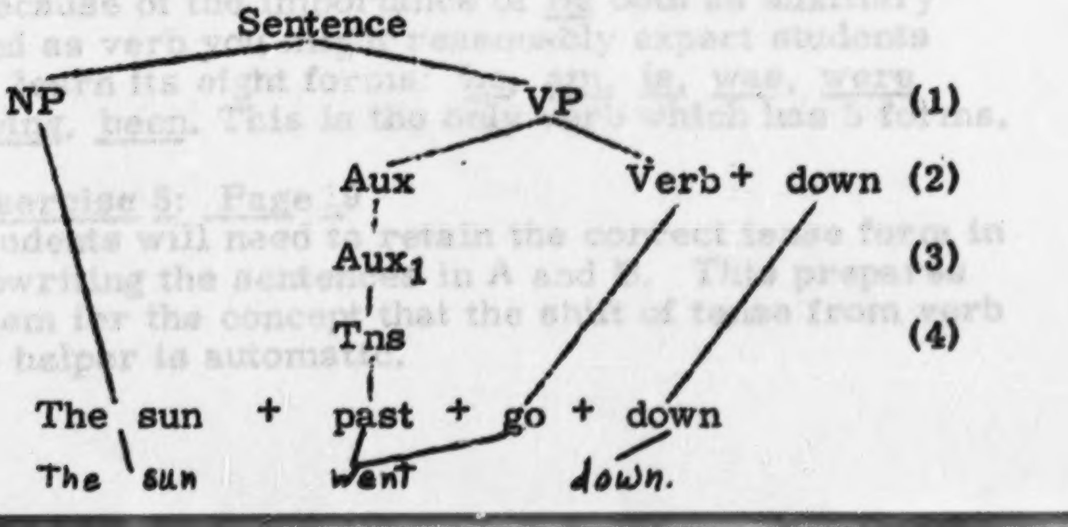
1.


Sentence
NP
VP
(1)
Aux
Verb + in the tire
(2)
Aux1
(3)
Tns
(4)
Nails + past + be + in the tire.
Nails were in the tire.

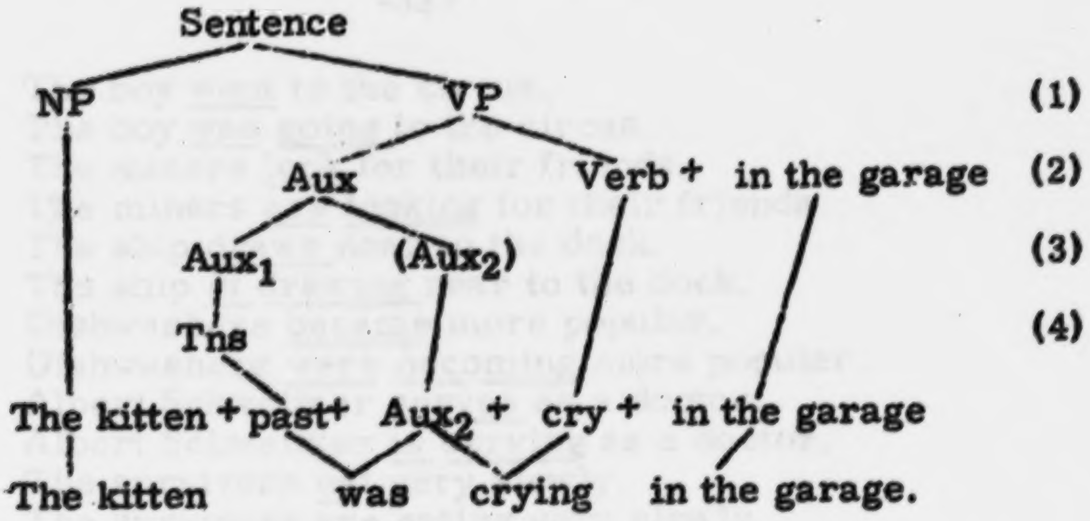
2.


Sentence
NP
VP
(1)
Aux
Verb + in formation
(2)
Aux1
(3)
Tns
(4)
The ducks + present + fly + in formation
The ducks fly in formation.

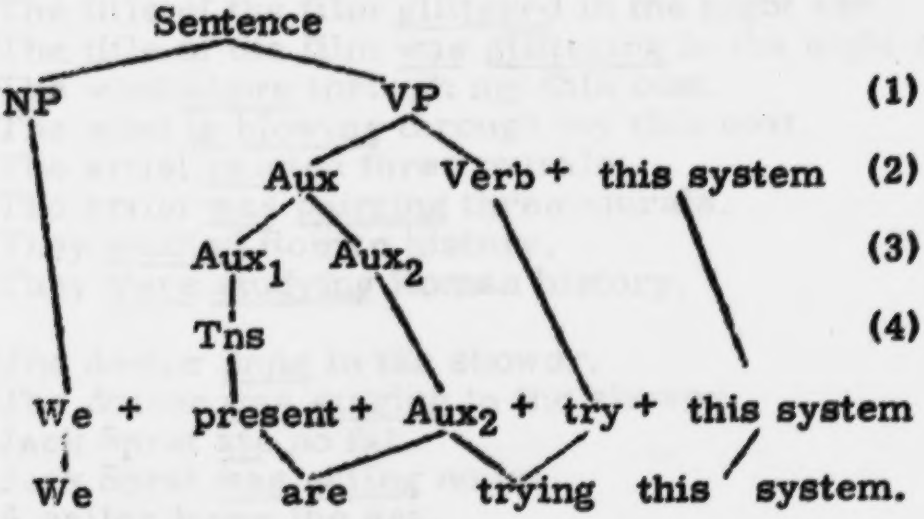
3.


Sentence
NP
VP
(1)
Aux
Verb + down
(2)
Aux1
(3)
Tns
(4)
The sun + past + go + down
The sun went down.

4


Sentence
NP
VP
(1)
Aux
Verb + in the garage
(2)
Aux_1
(Aux_2)
(3)
Tns
(4)
The kitten + past + Aux_2 + cry + in the garage
The kitten was crying in the garage.

5.


Sentence
NP
VP
(1)
Aux
Verb + this system
(2)
Aux_1 Aux_2
(3)
Tns
(4)
We + present + Aux_2 + try + this system
We are trying this system.

Past and Present: Page 18

Rule (5)
$$Tns \text{----} \left\{ \begin{array}{l} pres \\ past \end{array} \right\}$$

This is the first exclusive disjunctive rule, as rules of this type are known technically. That is, the element to the left of the arrow can be divided into two subsets. The tense of a sentence, then, will be one or the other, but not both.

Auxiliaries (Have + en) and (Be + ing): Page 18
Because of the importance of Be both as auxiliary and as verb you might reasonably expect students to learn its eight forms: be, am, is, was, were being, been. This is the only verb which has 8 forms.

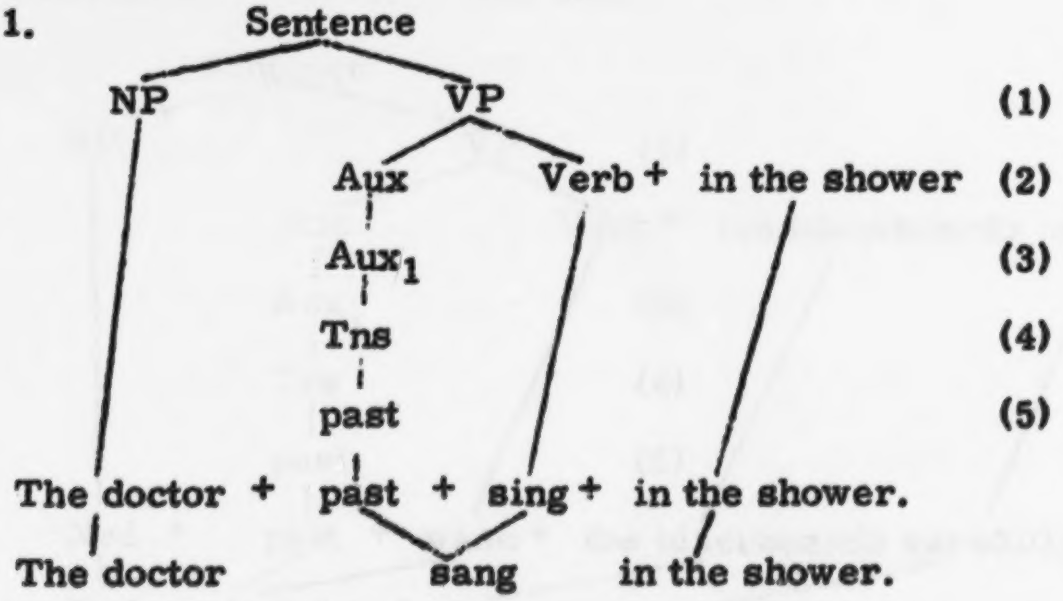
Exercise 8: Page 19
Students will need to retain the correct tense form in rewriting the sentences in A and B. This prepares them for the concept that the shift of tense from verb to helper is automatic.

A. 1. The boy went to the circus.
The boy was going to the circus.
2. The miners look for their friends.
The miners are looking for their friends.
3. The ship draws near to the dock.
The ship is drawing near to the dock.
4. Dishwashers became more popular.
Dishwashers were becoming more popular.
5. Albert Schweitzer serves as a doctor.
Albert Schweitzer is serving as a doctor.
6. The survivors eat very slowly.
The survivors are eating very slowly.
7. The title of the film glittered in the night sky.
The title of the film was glittering in the night sky.
8. The wind blows through my thin coat.
The wind is blowing through my thin coat.
9. The artist painted three murals.
The artist was painting three murals.
10. They studied Roman history.
They were studying Roman history.

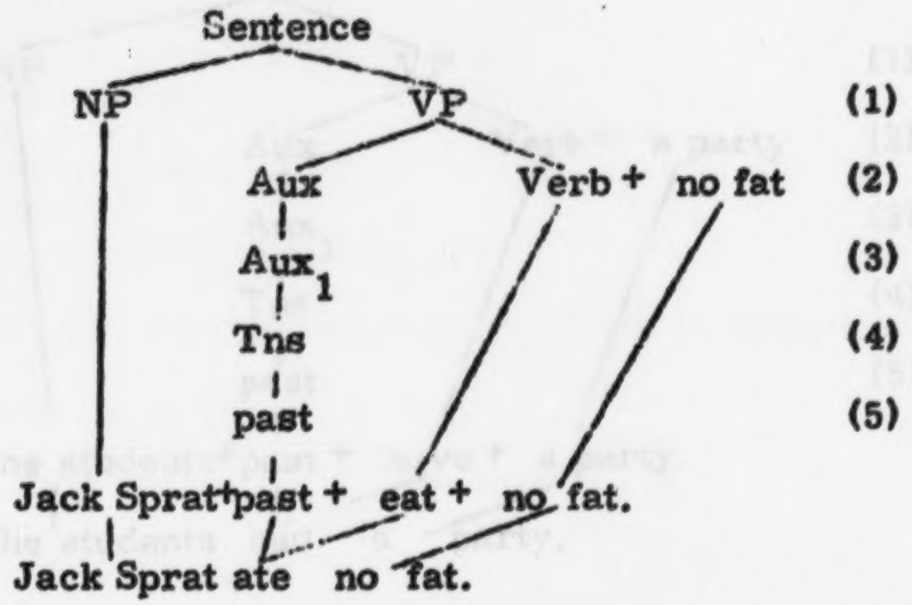
B. 1. The doctor sang in the shower.
The doctor was singing in the shower.
2. Jack Sprat ate no fat.
Jack Sprat was eating no fat.
3. A sailor loves the sea.
A sailor is loving the sea.
4. Ned washed the blackboards carefully.
Ned was washing the blackboards carefully.
5. The students had a party.
The students were having a party.

Exercise 8: Page 19

C. 1.

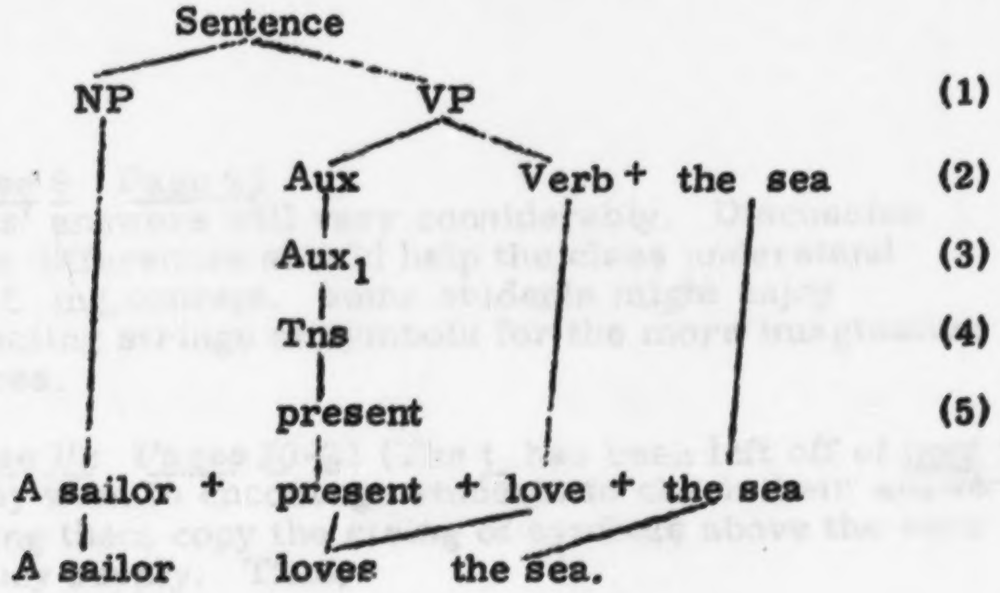


#2.

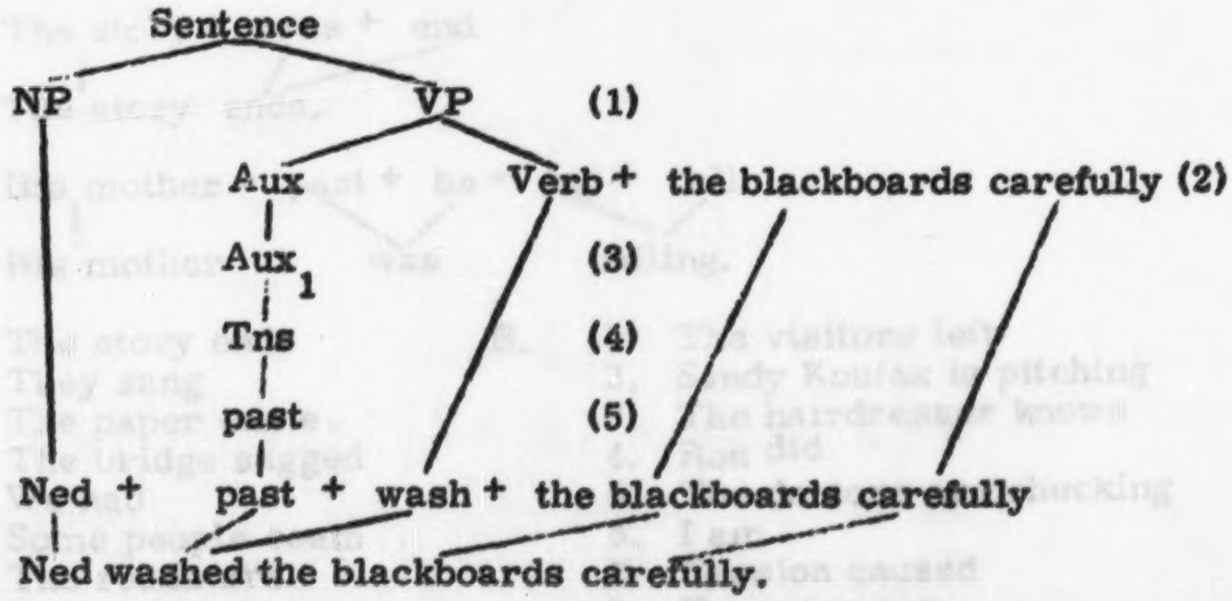

Sentence
NP
VP
(1)
Aux
Verb + no fat
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Jack Sprat+past + eat + no fat.
Jack Sprat ate no fat.

[You may treat no as a determiner or change it to some.]

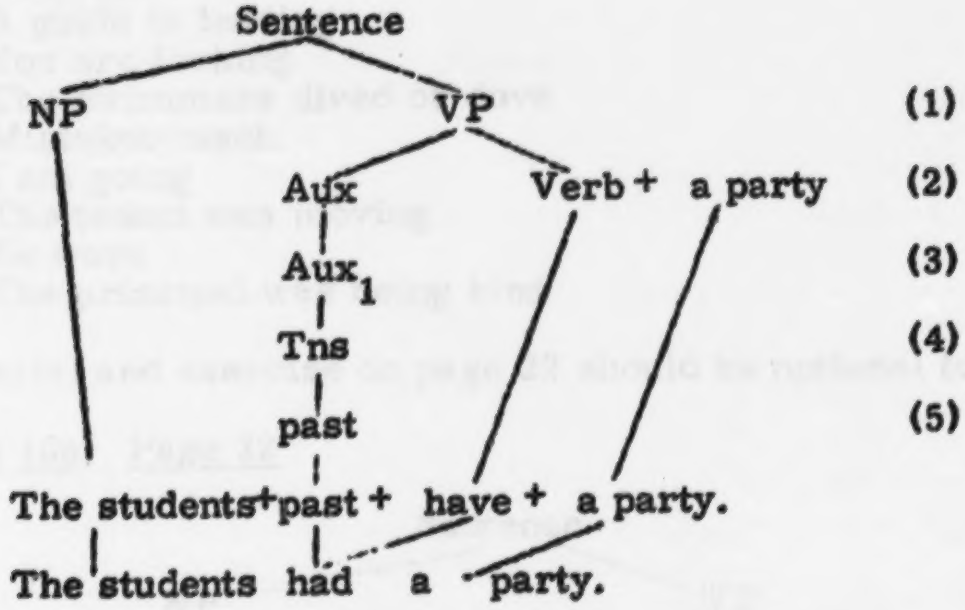
3.


Sentence
NP
VP
(1)
Aux
Verb + the sea
(2)
Aux$_1$
(3)
Tns
(4)
present
(5)
A sailor + present + love + the sea
A sailor loves the sea.

4.


Sentence
NP
VP
(1)
Aux
Verb + the blackboards carefully (2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Ned + past + wash + the blackboards carefully
Ned washed the blackboards carefully.

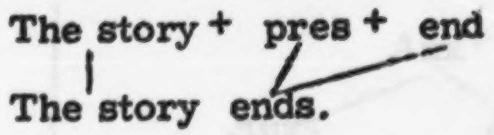
5.


Sentence
NP
VP
(1)
Aux
Verb + a party
(2)
Aux1
(3)
Tns
(4)
past
(5)
The students + past + have + a party.
The students had a party.

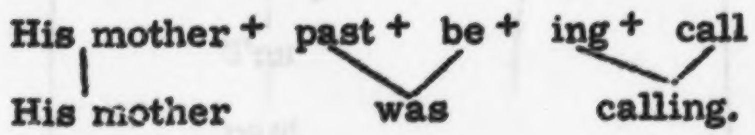
Exercise 9: Page 20
Students' answers will vary considerably. Discussion of these differences should help the class understand the Be ± ing concept. Some students might enjoy constructing strings of symbols for the more imaginative sentences.

Exercise 10: Pages 20-21 (The t has been left off of hunt in the example. You may want to encourage students to check their answers by having them copy the string of symbols above the verb form they supply. Thus,

1.


The story + pres + end
The story ends.

10.


His mother + past + be + ing + call
His mother was calling.

A.
1. The story ends
2. They sang
3. The paper came
4. The bridge sagged
5. We had
6. Some people seem
7. The roads are
8. Jesse bought
9. The sea is rising
10. His mother was calling

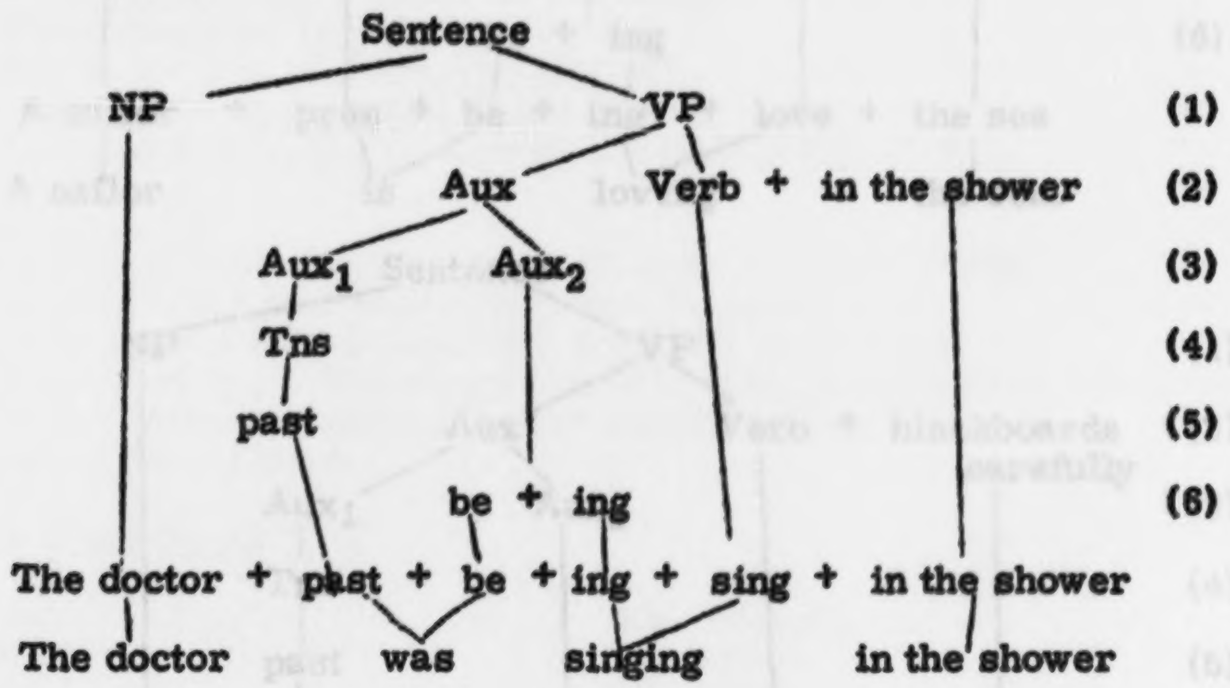
B.
1. The visitors left
2. Sandy Koufax is pitching
3. The hairdresser knows
4. Ron did
5. The doctors are checking
6. I am
7. Erosion caused
8. Everyone saw
9. Newsmen were saying
10. The sun was shining.

C.
1. **The customer paid**
2. **Lucy set**
3. **A guide is leading**
4. **You are looking**
5. **The swimmers dived or dove**
6. **Mistakes teach**
7. **I am going**
8. **The tenant was moving**
9. **He wore**
10. **The principal was being kind**

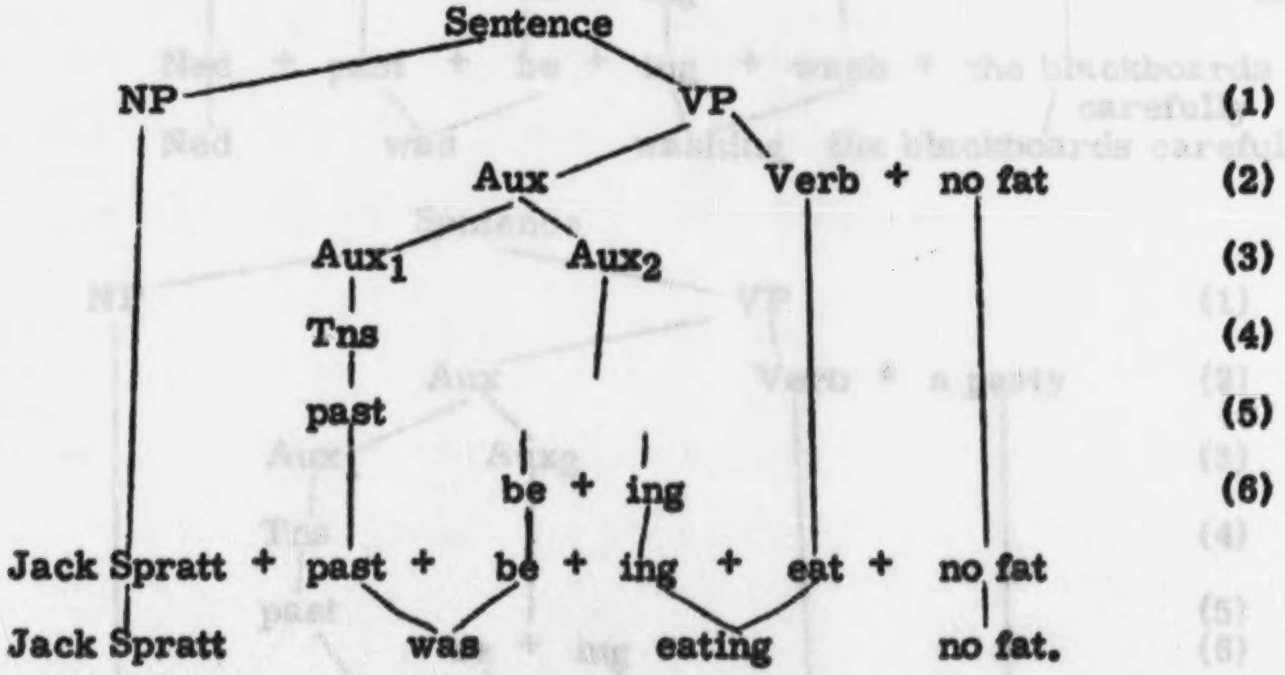
The material and exercise on page 22 should be optional for bright students

Exercise 10a: Page 22

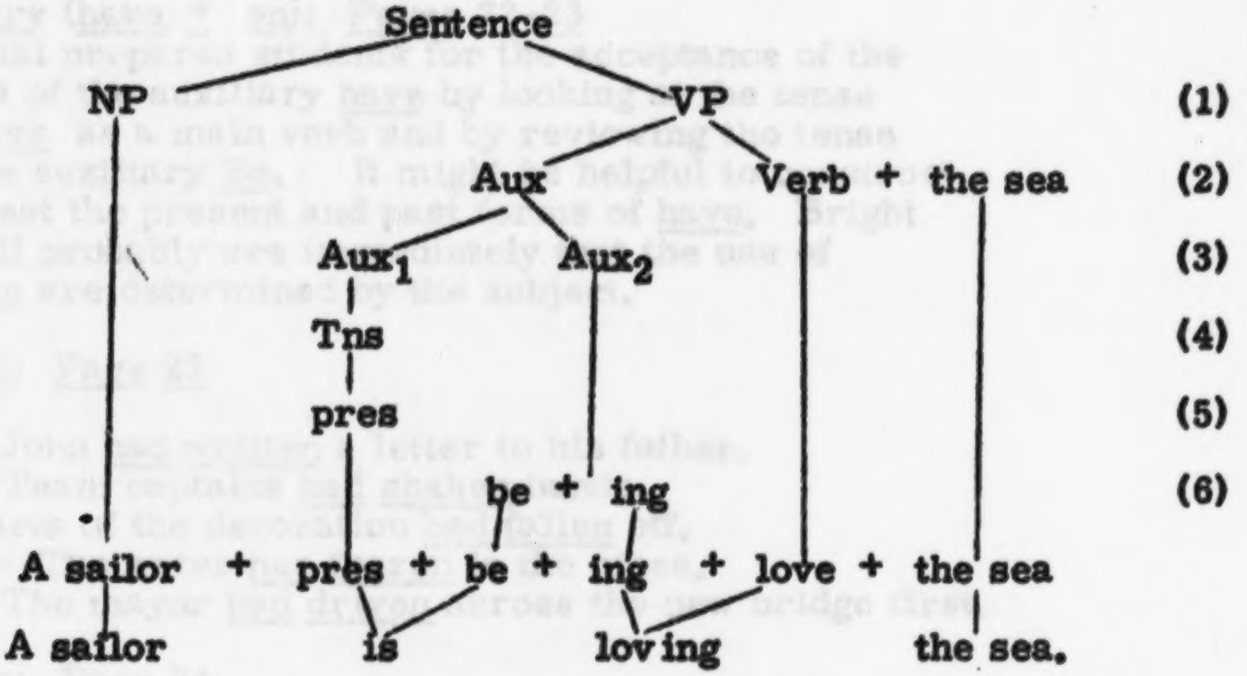
1.


Sentence
NP
VP
(1)
Aux
Verb + in the shower
(2)
Aux1
Aux2
(3)
Tns
(4)
past
(5)
be + ing
(6)
The doctor + past + be + ing + sing + in the shower
The doctor
was
singing
in the shower

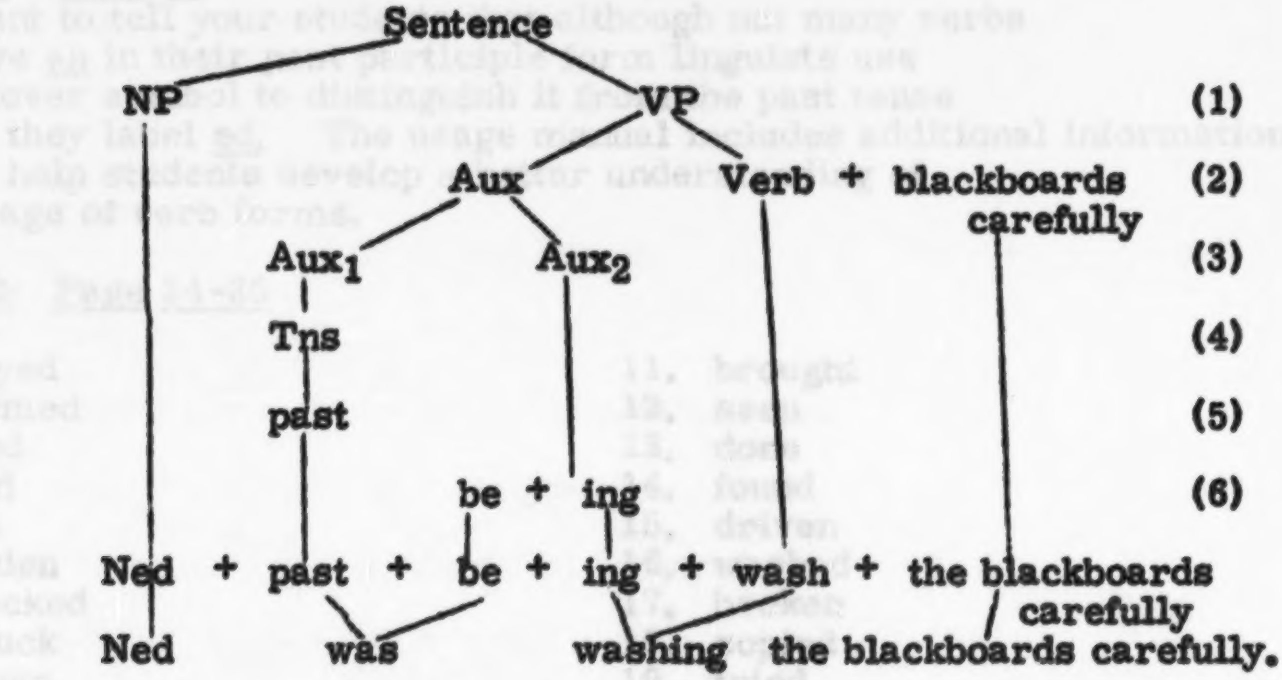
2.


Sentence
NP
VP
(1)
Aux
Verb + no fat
(2)
Aux1
Aux2
(3)
Tns
(4)
past
(5)
be + ing
(6)
Jack Spratt + past + be + ing + eat + no fat
Jack Spratt
was
eating
no fat.

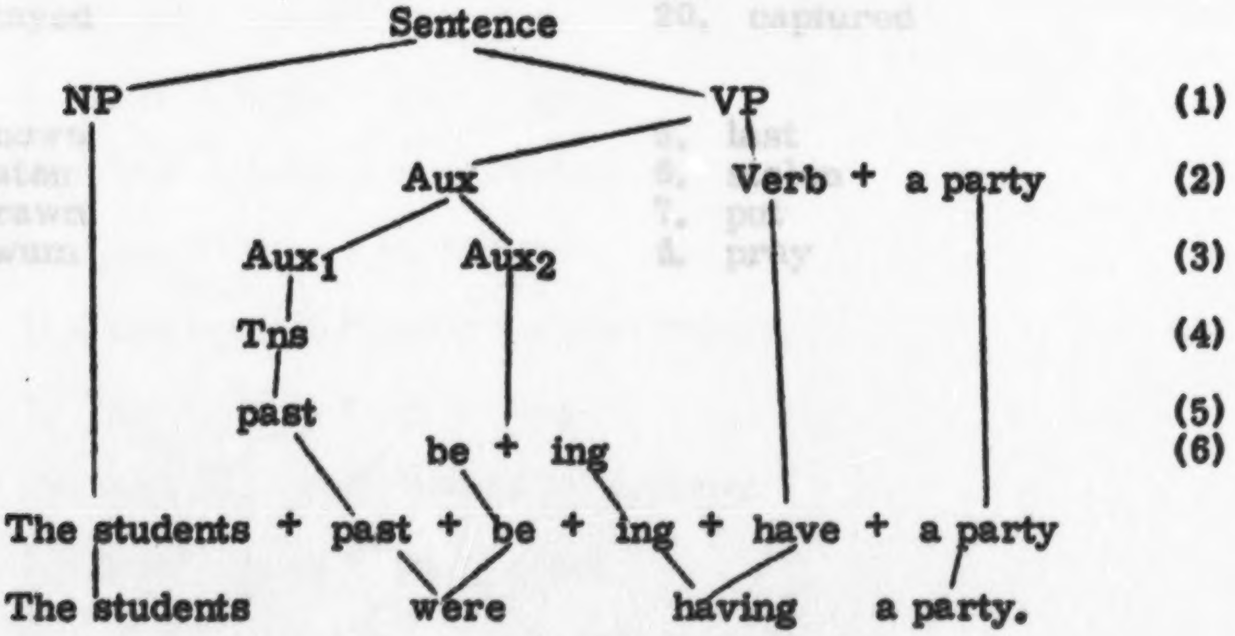
3.


Sentence
NP
VP
(1)
Aux
Verb + the sea
(2)
Aux1
Aux2
(3)
Tns
(4)
pres
(5)
be + ing
(6)
A sailor + pres + be + ing + love + the sea
A sailor
is
loving
the sea.

4.


Sentence
NP
VP
(1)
Aux
Verb + blackboards carefully
(2)
Aux1
Aux2
(3)
Tns
(4)
past
(5)
be + ing
(6)
Ned + past + be + ing + wash + the blackboards carefully
Ned
was
washing
the blackboards carefully.

5.


Sentence
NP
VP
(1)
Aux
Verb + a party
(2)
Aux1
Aux2
(3)
Tns
(4)
past
(5)
be + ing
(6)
The students + past + be + ing + have + a party
The students
were
having
a party.

The Auxiliary (have ± en): Pages 22-23

This material prepares students for the acceptance of the tense forms of the auxiliary have by looking at the tense forms of have as a main verb and by reviewing the tense forms of the auxiliary Be. It might be helpful to construct frames to test the present and past forms of have. Bright students will probably see immediately that the use of have and has are determined by the subject.

Exercise 11: Page 23

1. wrote--John had written a letter to his father.
2. shook--Team captains had shaken hands.
3. fell--Parts of the decoration had fallen off.
4. freezes--The water has frozen in the pipes.
5. drove--The mayor had driven across the new bridge first.

The en form: Page 24

You may want to tell your students that although not many verbs actually have en in their past participle form linguists use en as the cover symbol to distinguish it from the past tense form which they label ed. The usage manual includes additional information and drill to help students develop a better understanding of standard usage of verb forms.

Exercise 12: Page 24-25

A. 1. played
2. seemed
3. used
4. said
5. run
6. ridden
7. knocked
8. struck
9. grown
10. stayed
11. brought
12. seen
13. done
14. found
15. driven
16. washed
17. broken
18. copied
19. tried
20. captured

B. 1. known
2. eaten
3. drawn
4. swum
5. last
6. stolen
7. put
8. pray

#9. lain
10. sit
11. swung
12. thought
13. come
14. given
15. had
16. worn
17. been
18. fall
19. drunk
20. gone

Exercise 13: Page 25

A. 1. past + have + en + arrive

Susan had arrived with her mother.

2. past + have + en + work

We had worked very hard.

3. past + have + en + crawl

A snake had crawled onto the rock.

4. past + have + en + drop

The rescuers had dropped supplies.

5. pres + have + en + cover

Fog has covered the valley.

6. pres + have + en + hurry

The boys have hurried to finish the work.

7. pres + have + en + appear

Mr. Grimes has appeared in the garden.

8. pres + have + en + pass

Time has passed swiftly.

9. past + have + en + change

She had changed her mind again.

10. past + have _ en + hear

The audience had heard the joke before.

B. 1. past + have + en + ring

The bell had rung before we arrived.

2. pres + have + en + come

He has come for a cup of sugar.

3. past + have + en + give

Two newspapers had given conflicting reports.

4. pres + have + en + lose

Nick has lost his math book.

5. pres + have + en + write

You have written a good paper.

6. past + have + en + take

A bird had taken the ring.

7. pres + have + en + do

The doctors have done all they can.

8. past + have + en + begin

Many runners had begun the race.

9. pres + have + en + be

We have been here before.

10. pres + have + en + have

Steve has had no help.

C. 1. pres + have + en + fall

An awning has fallen on the sidewalk.

2. past + have + en + have

The medicine had had good results.

3. pres + have + en + sink

The barge has sunk.

4. past + have + en + drink

Dr. Jekyll had drunk the mixture.

5. pres + have + en + be

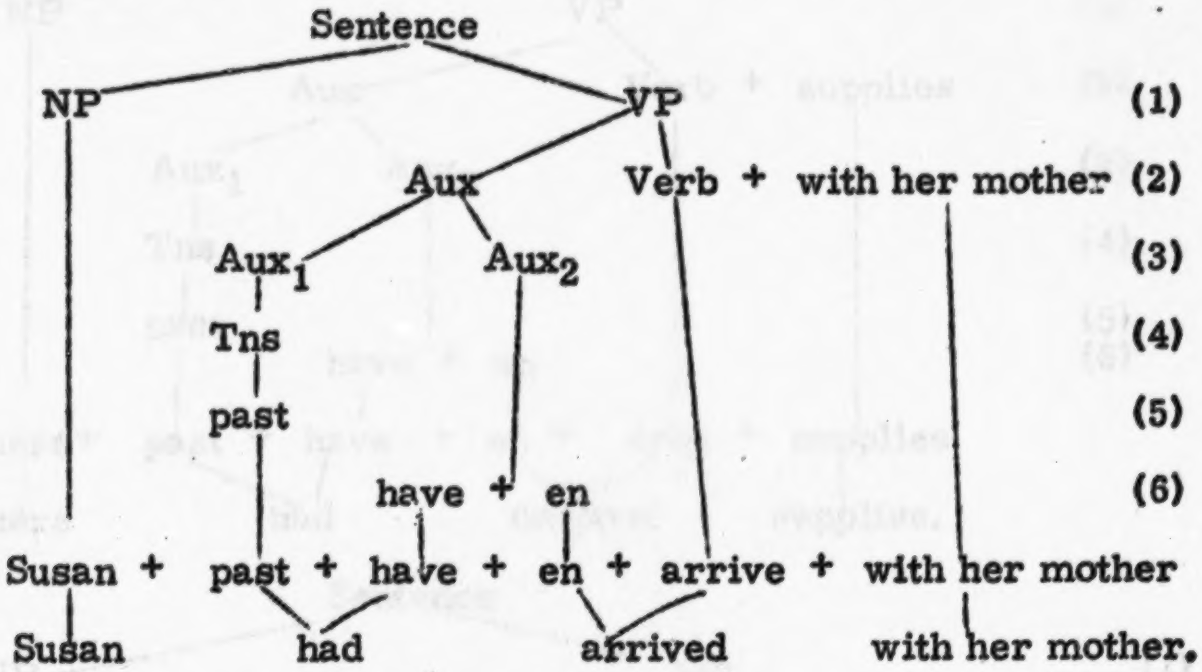
Weeds have been a nuisance.

6. pres + have + en + be + ing + throw

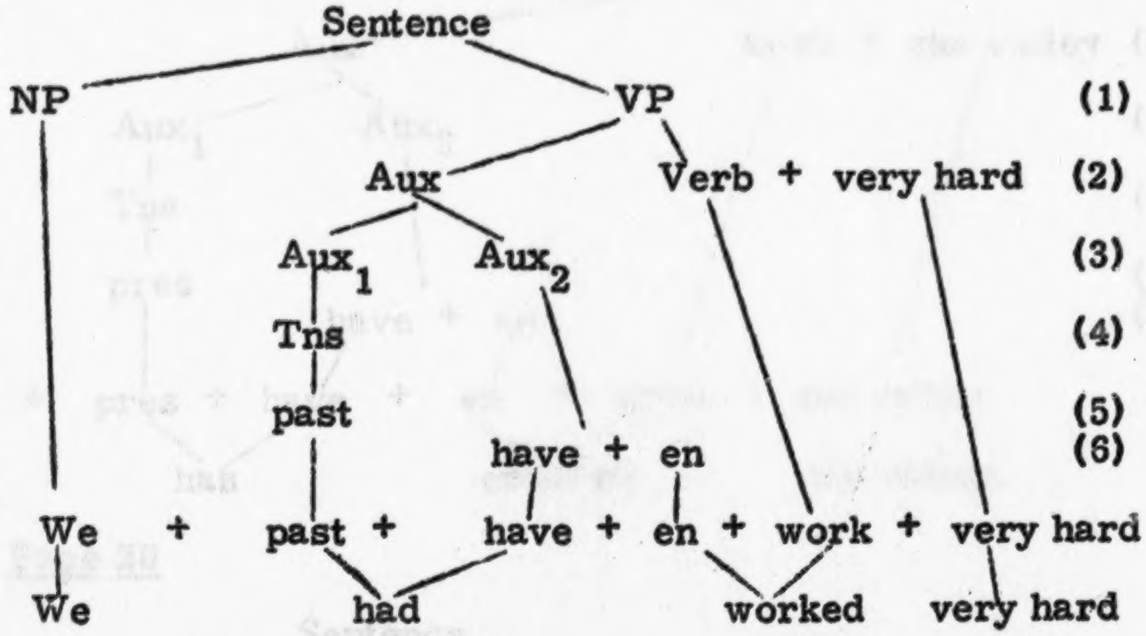
They have been throwing these away.

Exercise 13a: Page 27

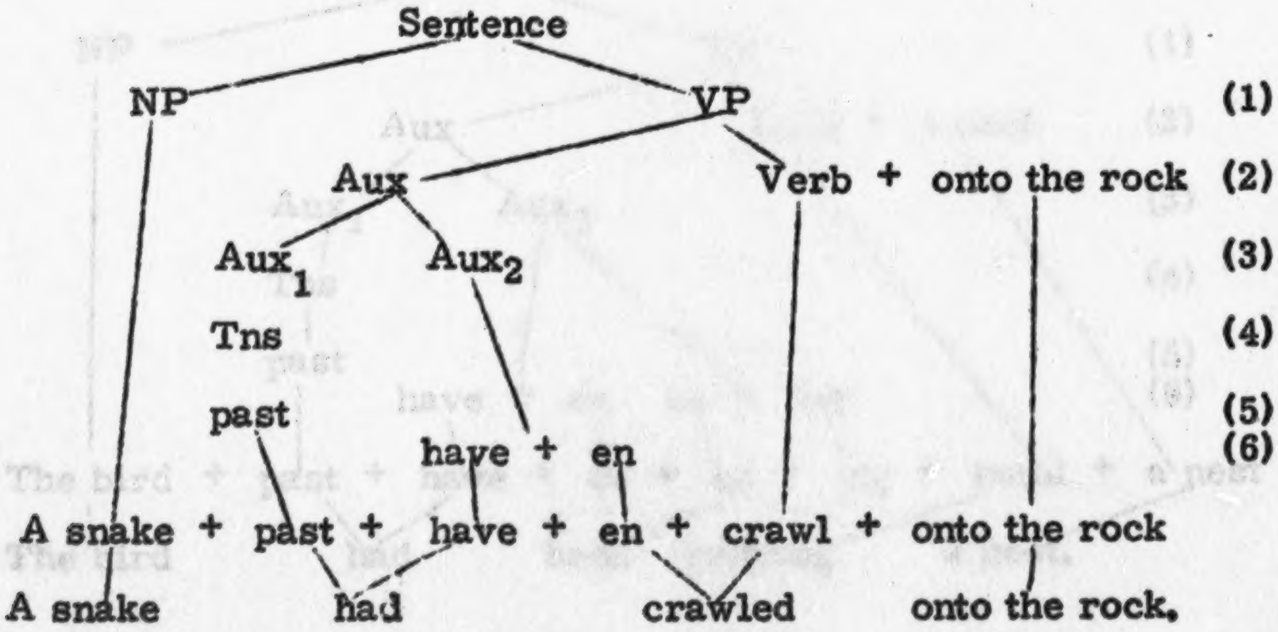
1.


Sentence
NP
VP
(1)
Aux
Verb + with her mother
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
(6)
Susan + past + have + en + arrive + with her mother
Susan had arrived with her mother.

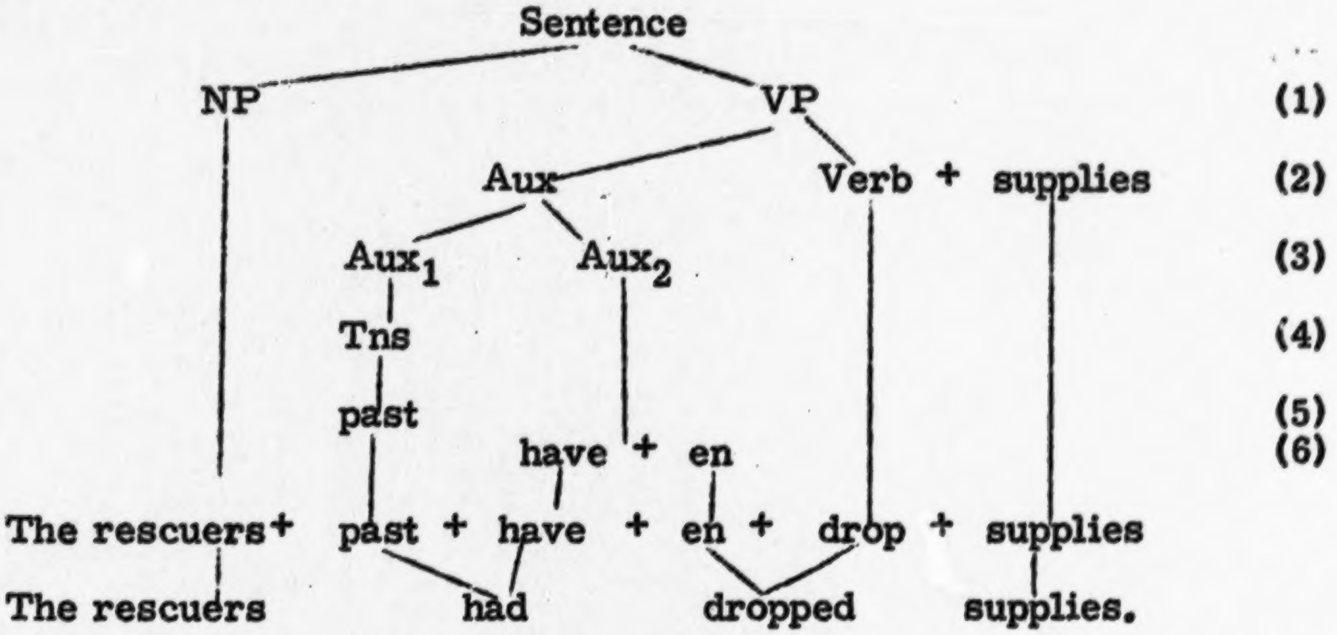
2.


Sentence
NP
VP
(1)
Aux
Verb + very hard
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
(6)
We + past + have + en + work + very hard
We had worked very hard

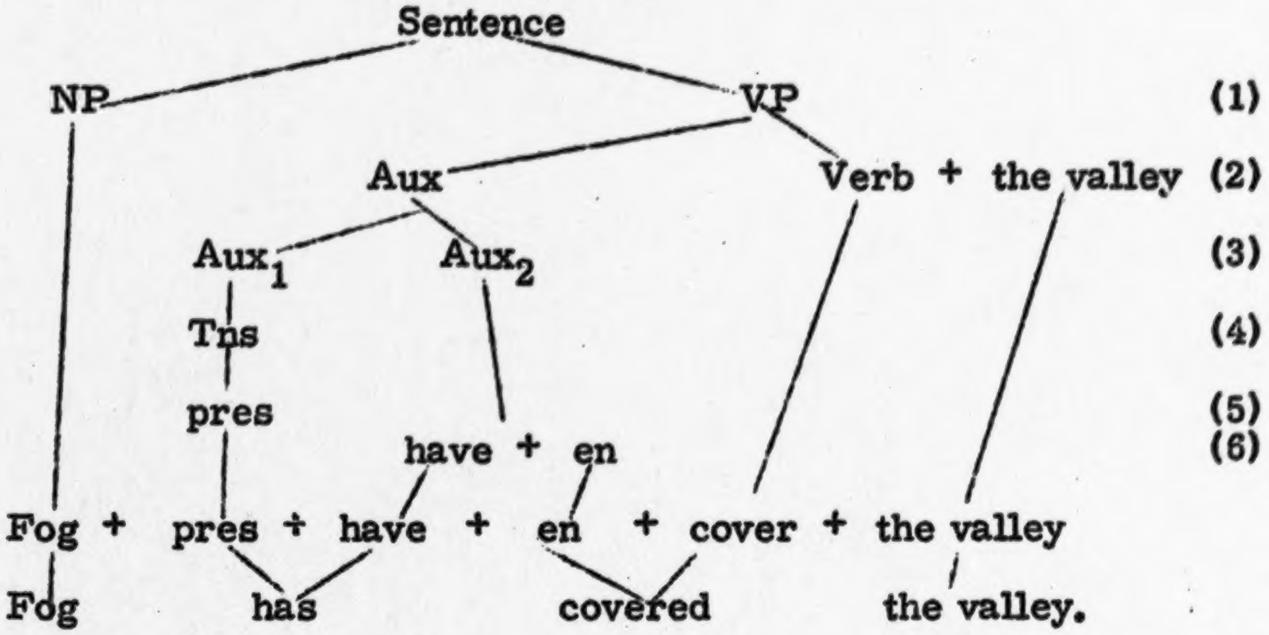
3.


Sentence
NP
VP
(1)
Aux
Verb + onto the rock
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
(6)
A snake + past + have + en + crawl + onto the rock
A snake had crawled onto the rock.

4.

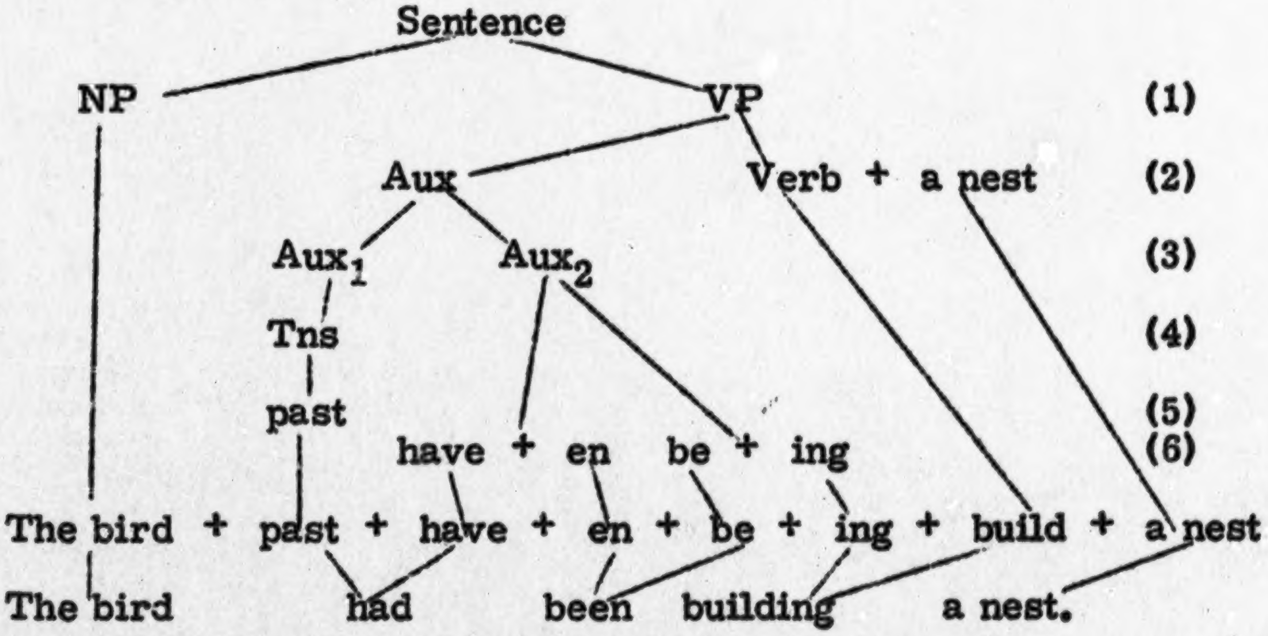

Sentence
NP
VP
(1)
Aux
Verb + supplies
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
(6)
The rescuers + past + have + en + drop + supplies
The rescuers
had
dropped
supplies.

5.

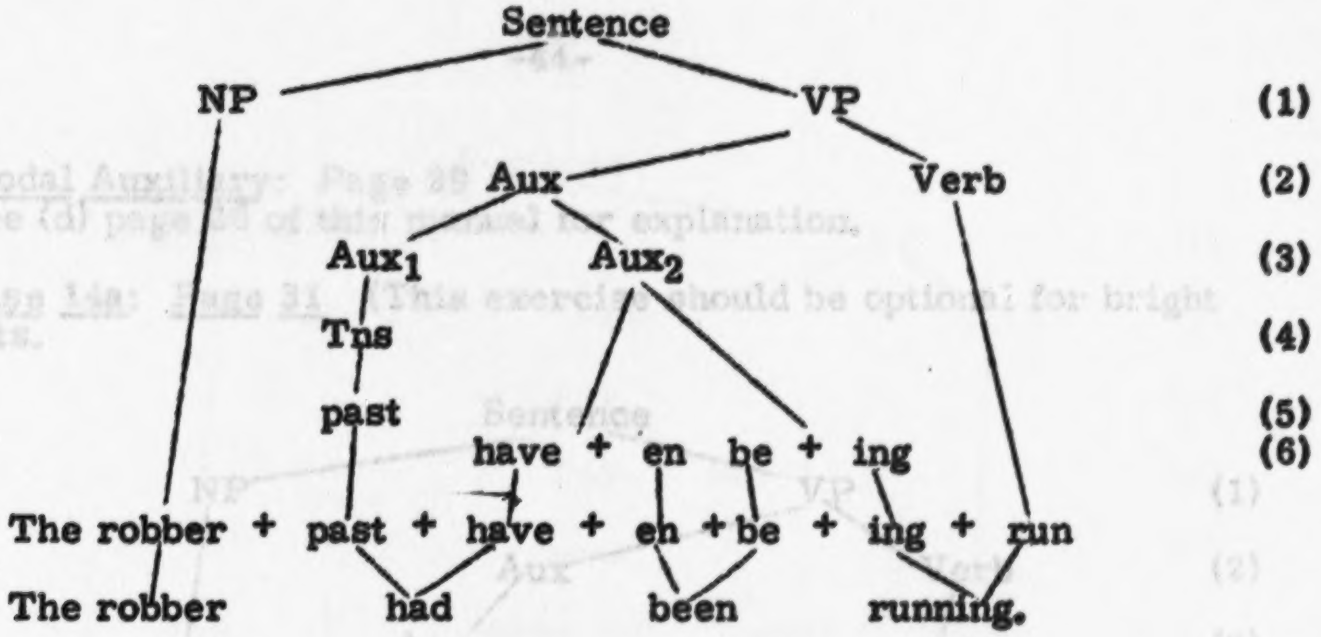

Sentence
NP
VP
(1)
Aux
Verb + the valley
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
pres
(5)
have + en
(6)
Fog + pres + have + en + cover + the valley
Fog
has
covered
the valley.

Exercise 13b: Page 29

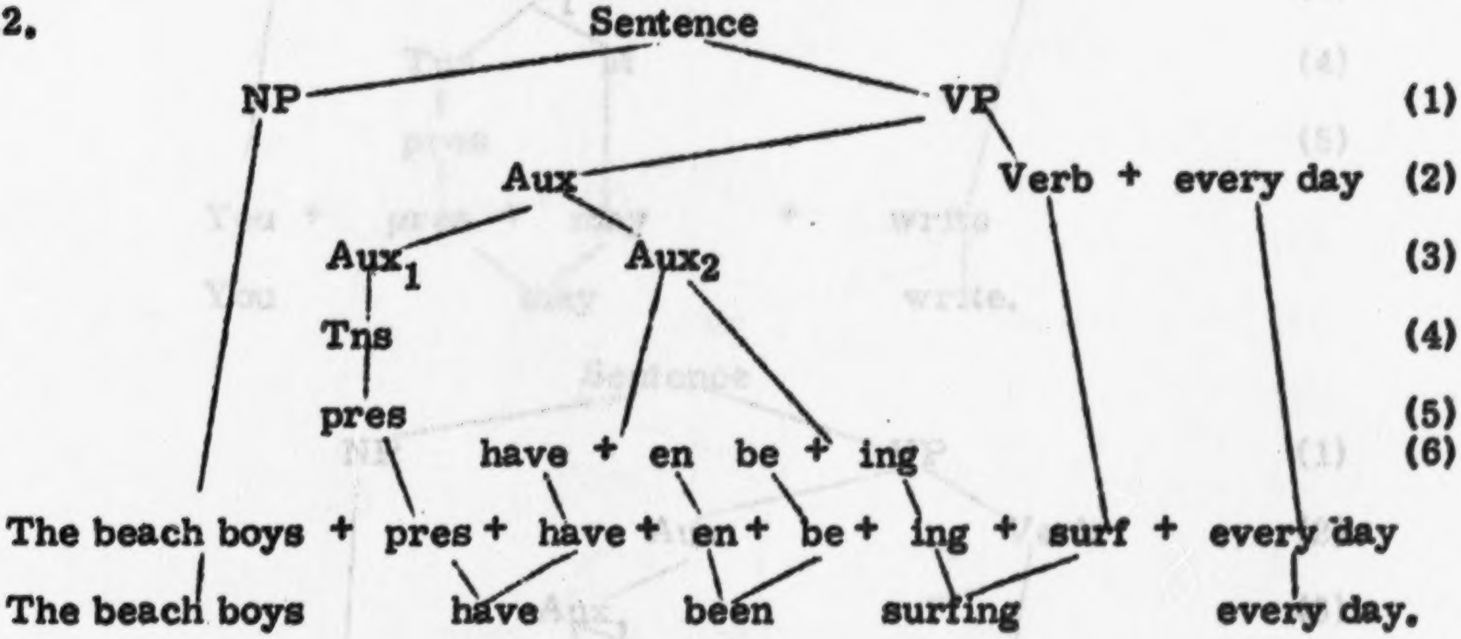
4,


Sentence
NP
VP
(1)
Aux
Verb + a nest
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
be + ing
(6)
The bird + past + have + en + be + ing + build + a nest
The bird
had
been
building
a nest.

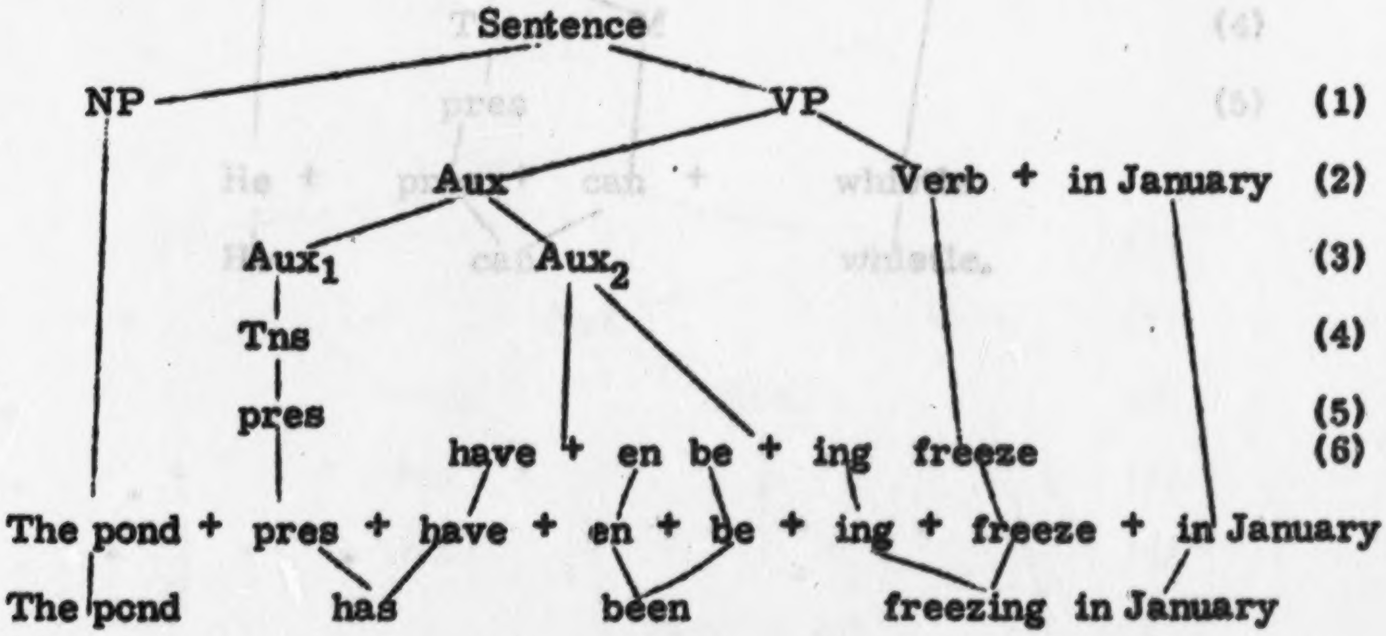
8.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux1
Aux2
(3)
Tns
(4)
past
(5)
have + en be + ing
(6)
The robber + past + have + en + be + ing + run
The robber had been running.

12.


Sentence
NP
VP
(1)
Aux
Verb + every day
(2)
Aux1
Aux2
(3)
Tns
(4)
pres
(5)
have + en be + ing
(6)
The beach boys + pres + have + en + be + ing + surf + every day
The beach boys have been surfing every day.

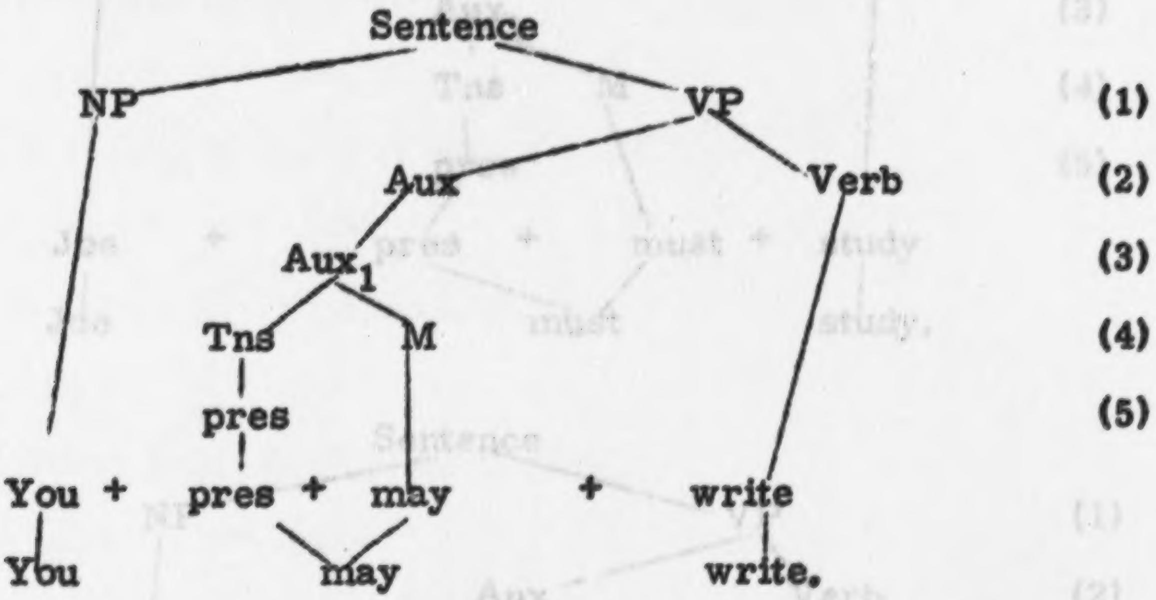
16.


Sentence
NP
VP
(1)
Aux
Verb + in January
(2)
Aux1
Aux2
(3)
Tns
(4)
pres
(5)
have + en be + ing freeze
(6)
The pond + pres + have + en + be + ing + freeze + in January
The pond has been freezing in January

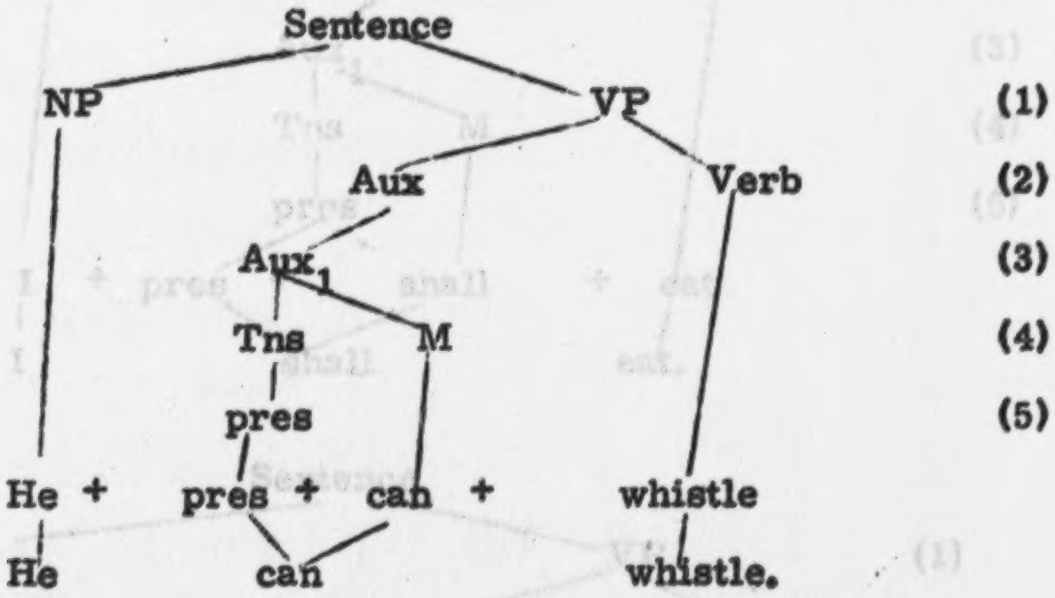
The Modal Auxiliary: Page 29
See (d) page 26 of this manual for explanation.

Exercise 14a: Page 31 (This exercise should be optional for bright students.

1.


Sentence
NP
VP
Aux
Verb
Aux_1
Tns
M
pres
You + pres + may + write
You may write.
(1)
(2)
(3)
(4)
(5)

2.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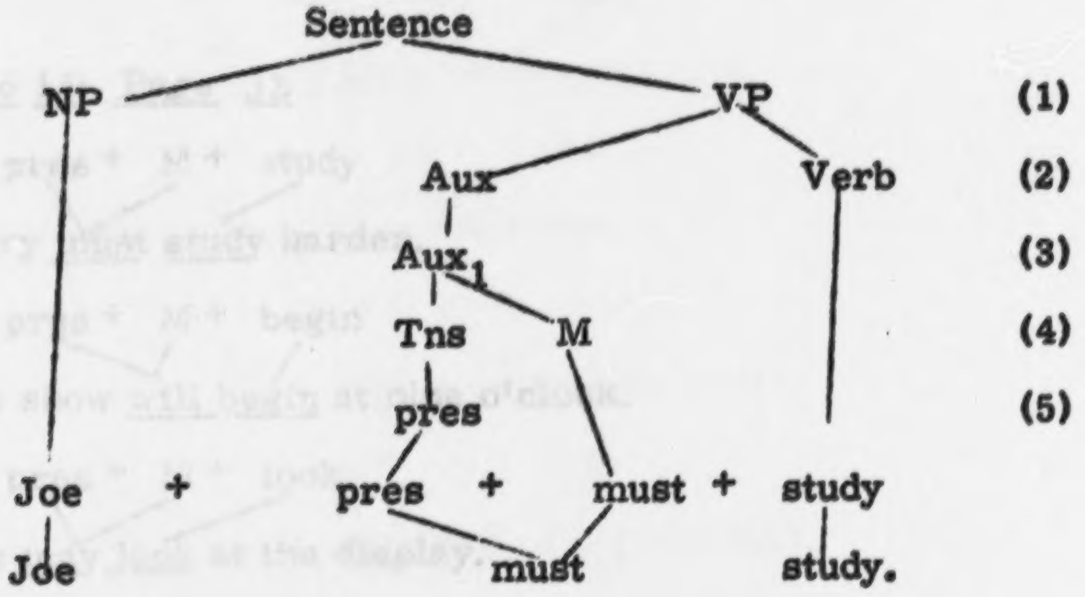
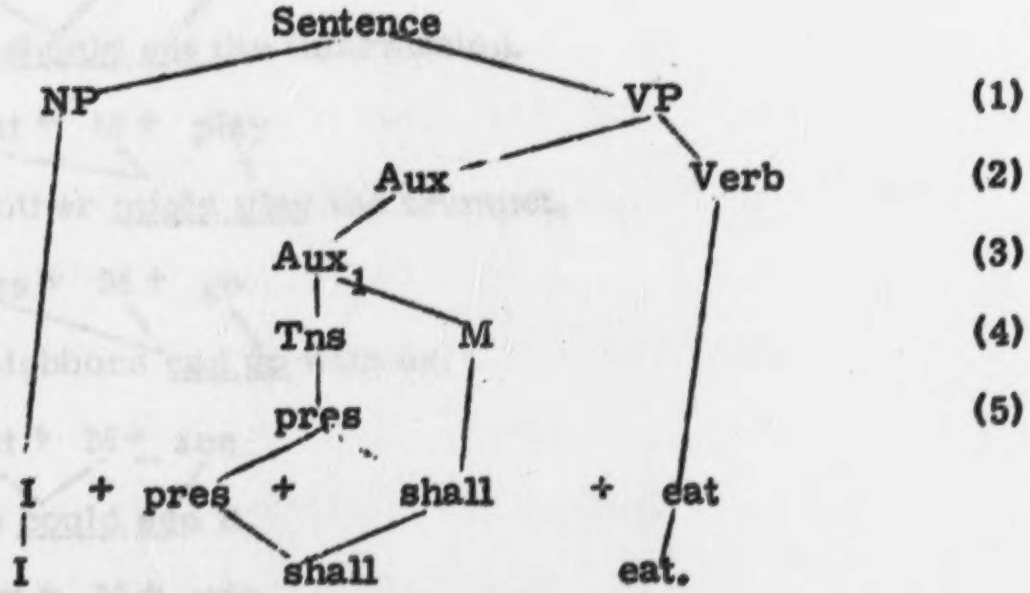
VP
Aux
Verb
Aux_1
Tns
M
pres
He + pres + can + whistle
He can whistle.
(1)
(2)
(3)
(4)
(5)

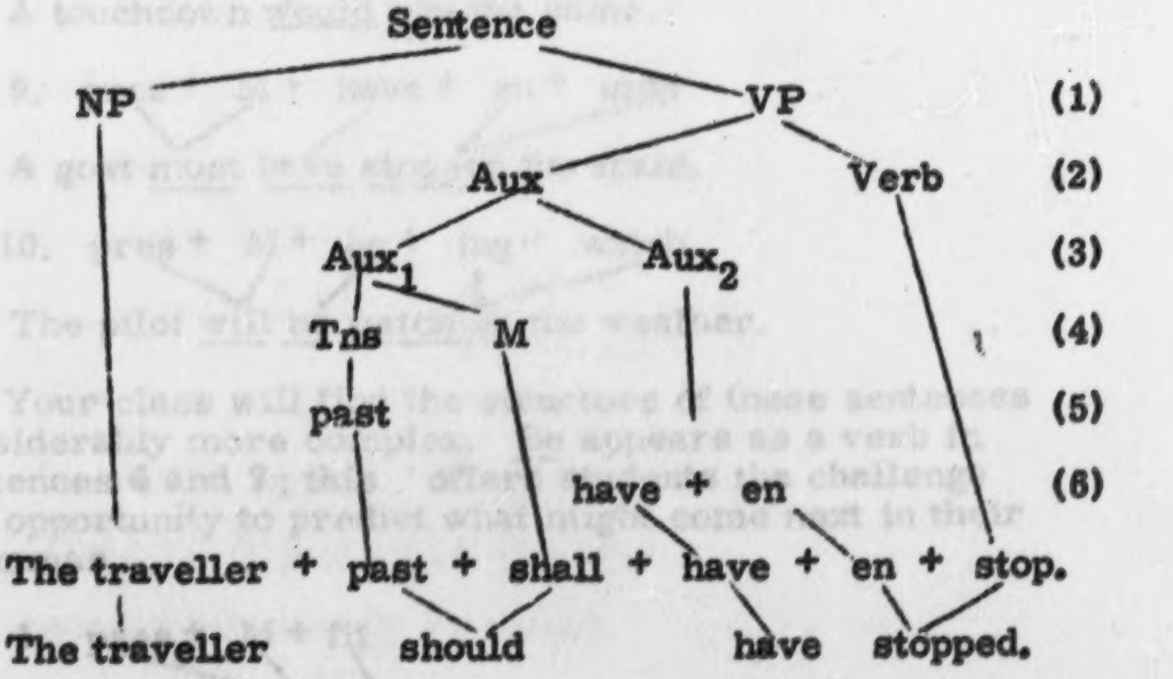
3.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux_1
(3)
Tns
M
(4)
pres
(5)
Joe + pres + must + study
Joe must study.

4.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux_1
(3)
Tns
M
(4)
pres
(5)
I + pres + shall + eat
I shall eat.

5.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux_1
Aux_2
(3)
Tns
M
(4)
past
(5)
have + en
(6)
The traveller + past + shall + have + en + stop.
The traveller should have stopped.

Exercise 14: Page 32

A. 1. pres + M + study

Jerry must study harder.

2. pres + M + begin

The show will begin at nine o'clock.

3. pres + M + look

You may look at the display.

4. past + M + get

Frank should get the information.

5. past + M + play

His brother might play the trumpet.

6. pres + M + go

The neighbors can go with us.

7. past + M + see

No one could see it.

8. past + M + win

A touchdown would win the game.

9. pres + M + have + en + stop

A goat must have stopped the train.

10. pres + M + be + ing + watch

The pilot will be watching the weather.

B. Your class will find the structure of these sentences considerably more complex. Be appears as a verb in Sentences 6 and 9; this offers students the challenge and opportunity to predict what might come next in their grammar.

1. pres + M + fit

The pattern must fit the material.

2. past + M + have + en + write

The prisoner could have written the note.

3. past + M + be + ing + read

He should be reading in his room.

4. pres + M + have + en + accept

The Trojans must have accepted the horse.

5. past + M + have + en + help

A kind word would have helped a great deal.

#6. pres + M + Be

The test will be easy.

7. past + M + have + en + be + ing + wear

The men should have been wearing heavy clothes.

#8. past + M + have + en + Be

John's demonstration might have been better.

9. pres + M + be + ing + come

The water can be coming from springs.

10. past + M + have + en + take

Dinner should have taken less time.

Exercise 15: Page 32-33

A. 1. past + flash

Lightning flashed.

2. pres + start

The rally starts next week.

3. past + have + en + drive

The girls had driven fifty miles.

#[The sentence contains Be as a verb.]

4. past + be + ing + swim

The scouts were swimming in the lake.

5. pres + have + en + injure

Herman has injured his foot.

6. past + move

Our neighbors moved away.

7. pres + be + ing + sink

These weights are sinking the boat.

8. past + M + taste

The steak should taste good.

9. pres + have + en + be + ing + take

Only our friends have been taking us seriously.

10. pres + M + have + en + hear

You may have heard the talk.

B. 1. pres + have + en + see

Mother has seen Mrs. Macy.

2. past + M + be + ing + hide

Trout should be hiding there.

3. pres + have + en + be + ing + attract

Crater Lake has been attracting large crowds.

4. pres + M + have + en + say

Ulysses must have said something wrong.

5. pres + have + en + be + ing + give

Great men have been giving time to this problem.

6. past + M + have + en + do

I would have done it differently.

7. past + M + have + en + be + ing + collect

Kevin could have been collecting grasshoppers.

8. pres + have + en + be + ing + sit

The basket has been sitting there since Thursday.

9. past + have + en + have

Most of the group had had the measles.

10. pres + have + en + Be

Jack has been our fire tender.

11. pres + M + have + en + be + ing + sleep

Robby may have been sleeping all day.

12. pres + be + ing + cause

The new puppies are causing much trouble.

Exercise 16: Review: Page 33
While students' sentences will vary, the verb combinations used should be similar to these:

A.
1. do or does
2. spoke
3. have or has broken
4. was or were cleaning
5. may, can, shall, will, or must think
6. is, am, or are
7. am, is, are buying
8. had begun
9. might, should, could, or would be writing
10. has or have marched.

B.
1. was or were riding
2. may, can, shall, will, or must go
3. might, could, should, or would go
4. has or have been taking
5. may, can, shall, will, or must be catching
6. had had
7. may, can, shall, will, or must have come
8. saw
9. might, could, should or would have been reading
10. has or have been raising

# [The sentence contains Be as a verb.]

C. The directions in C should read: Construct strings of symbols for the verbs in the introductory sentences on page 12. This exercise offers a quick review of the ways auxiliaries affect verb form and the strings of symbols that result. You might ask some students to place diagrams for these sentences on the board and to write the six rules used in constructing the diagrams and strings of symbols. This should show all students how phrase structure rules reconsider and rewrite elements of previous rules.

1. pres + drive
drives

2. past + drive
drove

3. pres + be + ing + drive
is driving

4. pres + have + en + drive
has driven

5. pres + have + en + be + ing + drive
has been driving

6. pres + M + drive
may drive

7. past + M + have + en + be + ing + drive
should have been driving

8. past + M + be + ing + drive
could be driving

RULE (7): THE VERB BE

The equality in number which exists between the elements on each side of Be (and some linking verbs--usually stay, remain, and become, in American English) is very general but there are exceptions. For example, we say "The people are the government."; "The government is the people."

The statement that "Be is the only verb that can [invert in questions] without adding an Aux" is not quite accurate, for the lexical verb have (not the Aux have) has this property in many dialects. ("Have you a book on Essex?" for example.) Note, however, that unlike the lexical Be, have offers a choice in this respect:

(i) He has a dog. ⟹

(ii) Has he a dog?

or

(ii) Does he have a dog?

Whereas:

(i) He is my friend. ⟹

(ii) Is he my friend?

But not (except in stage Irish):

(iii) *Does he be my friend?

Notice that Aux have does not have the choice of lexical have:

(i) He has been here. ⟹

(ii) Has he been here?

But not

(iii) *Does he have been here?

Exercises: Rule 7

Exercise 1: Pages 35-36

All students will need to do both A and B in this exercise to see that the verb Be does connect words of equal value (in A) and that other verbs, excluding linking verbs of course, do not (in B). Some students will probably observe that the subject (NP) and the word used after Be do refer to the same thing; that is, they are equivalents.

* indicates a nongrammatical sentence

A. 1. Jonathan = quarterback
2. Mr. Grimes = mayor
3. boys = rivals
4. aunts = (snake) charmer
5. I = librarian
6. marbles = beauties
7. mayor = judge
8. caterpillars = pests
9. cousins = firefighters
10. Tomatoes = vegetables

B. 1. Tom = elephants
2. girl = watermelon
3. witch = brooms
4. minister = snails
5. Rosa = tumbleweeds
6. cat = canaries

Exercise 2: Page 36
These sentences provide an opportunity for students to test their ability to sort out the verb Be from all other verbs. This reenforces the idea that they are considering Be as a small class of verbs. You might want to explain that all remaining verbs are lumped together at this point, resulting in a rule that says that all verbs are either Be or another verb, and that the other verbs will be studied subsequently in a similar manner.

Verbs in Sentences 2, 4, 5, 8, 10 cannot be replaced with = .

1. castle = museum
2. Bill = tank
3. home = (briar) patch
4. lookout = whale
5. Seaweed = propeller
6. horse = Clydesdale
7. allowance = dollar
8. General Lee = Traveler
9. king = tyrant
10. farmer = straw

Exercise 3: Pages 36-37
This exercise was included to show students the equality in number which exists between the elements on each side of Be. (Some linking verbs also have this quality.) Again, students will need to do both A and B.

No sentences in A have just one plural word because Be is used here to connect equivalents. Sentences 3, 4, 6, 8, 9, and 10 have the pairs of plural words.

A. 3. boys = rivals
4. aunts = charmers
6. marbles = beauties
8. caterpillars = pests
9. cousins = firefighters
10. tomatoes = vegetables

In B, most sentences contain a singular subject with a plural word following the verb. But the number of either the subject or the word following can change without affecting the other. But in A, if one changes, the other must. This emphasizes the freedom other kinds of verbs have to select an object that does not necessarily agree in number with the subject.

B. 1. Tom = elephants
2. girl = watermelon
3. witch = brooms
4. minister = snails
5. Rosa = tumbleweeds
6. cat = canaries

Exercise 4: Pages 37-38

Sentence 9 which obviously lacks either a predicate noun or predicate adjective is included to encourage students to predict the third kind of predicate word that may follow Be.

1. The weather is perfect.
The perfect weather is perfect.

2. The kitten's fur was thick.
The kitten's thick fur was thick.

3. The foreign student has been unhappy.
The unhappy foreign student has been unhappy.

4. His hands are cold.
His cold hands are cold.

5. The milk is sour.
The sour milk is sour.

6. My tonsils were swollen.
My swollen tonsils were swollen.

7. Trimble's feet are frostbitten.
Trimble's frostbitten feet are frostbitten.

8. The fudge cake was delicious.
The delicious fudge cake was delicious.

9. The house was there.

Exercise 5: Page 39.

The main objective in this exercise is to show students that the verb Be must be followed by a Pr which may be a noun, an adjective, or an adverbial.

Exercise 6: Page 39

1. NP + past + Be + Pr
Bruno was lucky.

2. NP + past + Be + Pr
   The children were outside.

3. NP + pres + Be + Pr
   I am the representative.

4. NP + pres + have + en + Be + Pr
   Miss Biggs has been a meteorologist.

5. NP + past + be + ing + Be + Pr
   The chimps were being talkative.

6. NP + pres + Be + Pr
   Porpoises are fun.

7. NP + pres + M + have + en + Be + Pr
   The boy must have been a problem.

8. NP + past + have + en + Be + Pr
   Tommy had been a ventriloquist.

9. NP + past + M + Be + Pr
   Nancy should be the chairman.

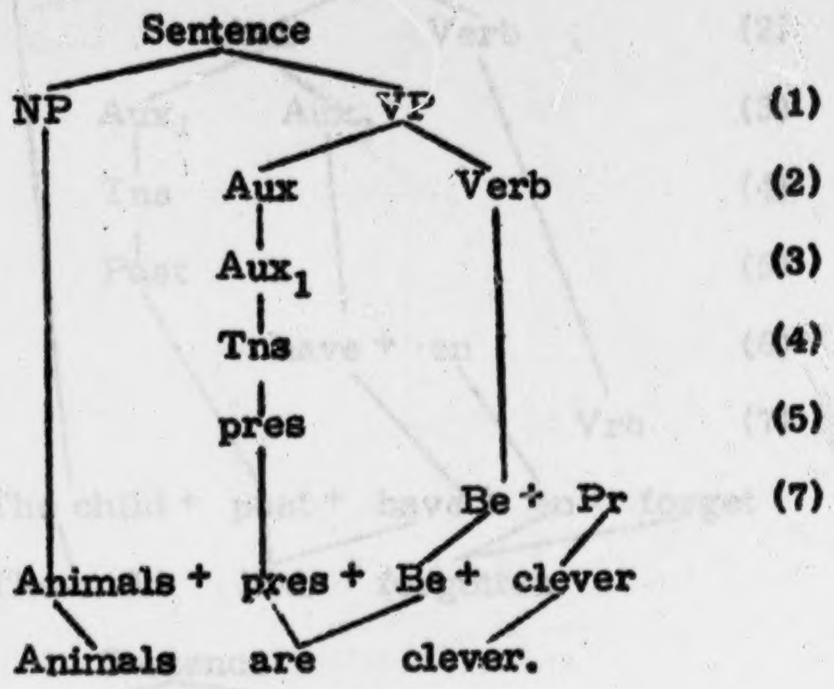
10. NP + past + M + Be + Pr
    The cat might be away.

Exercise 7: Page 40
This exercise demonstrates the ease with which Be forms invert into questions without requiring the addition of do or another auxiliary. (See Paragraph 2, page 44of this manual.)

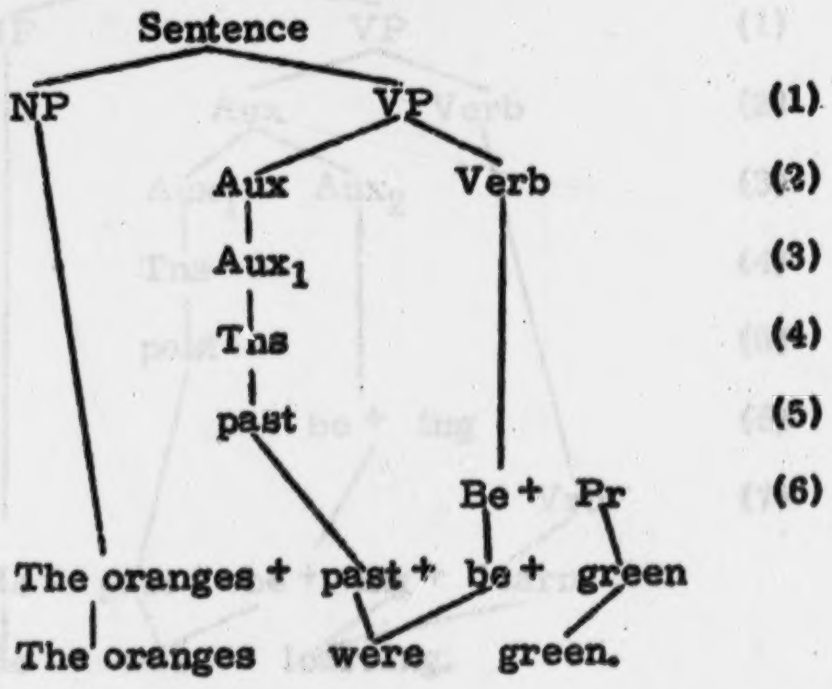
1. Am I your best friend?
2. Is Ronald a superior student?
3. Are you the lucky winner?
4. Was mother unhappy?
5. Were the apples bright red?
6. Have the math tests been difficult this year?
7. Is he being a nuisance?
8. Will you be sorry?
9. Was the accident a calamity?
10. Has he been inside?

Exercise 8: Pages 43-44

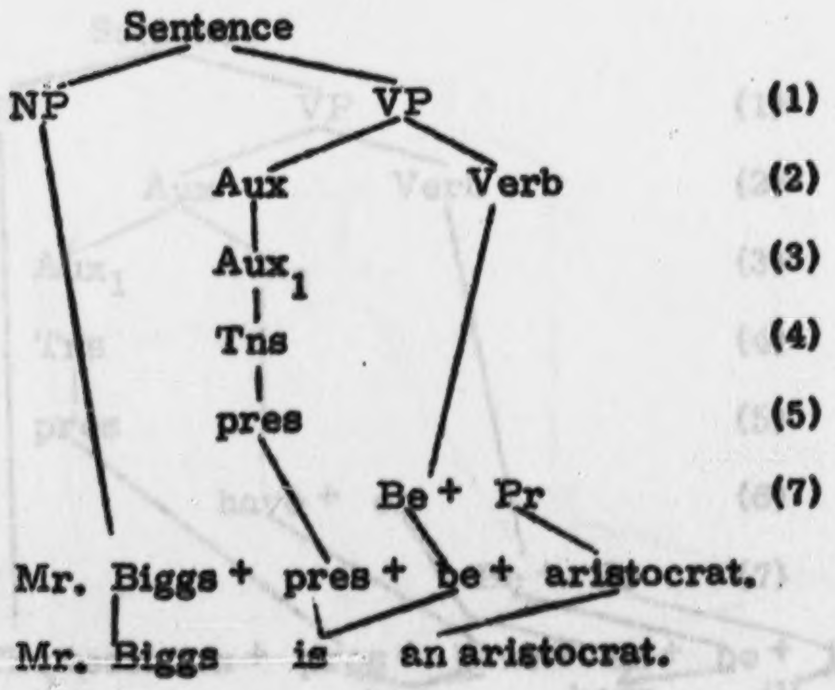
A. 1.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
pres
(5)
Be + Pr
(7)
Animals + pres + Be + clever
Animals are clever.

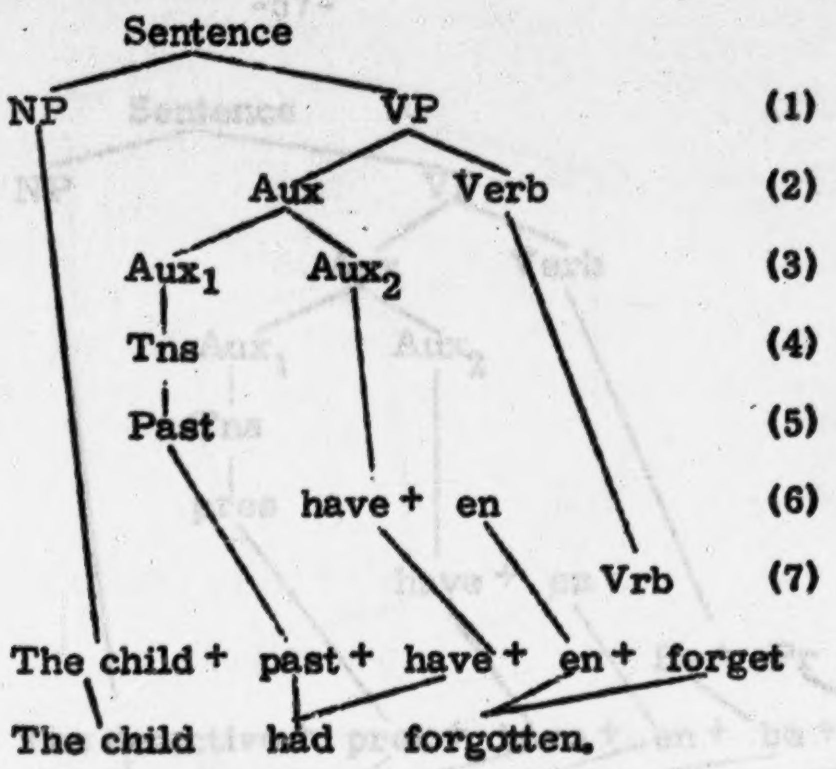
2.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Be + Pr
(6)
The oranges + past + be + green
The oranges were green.

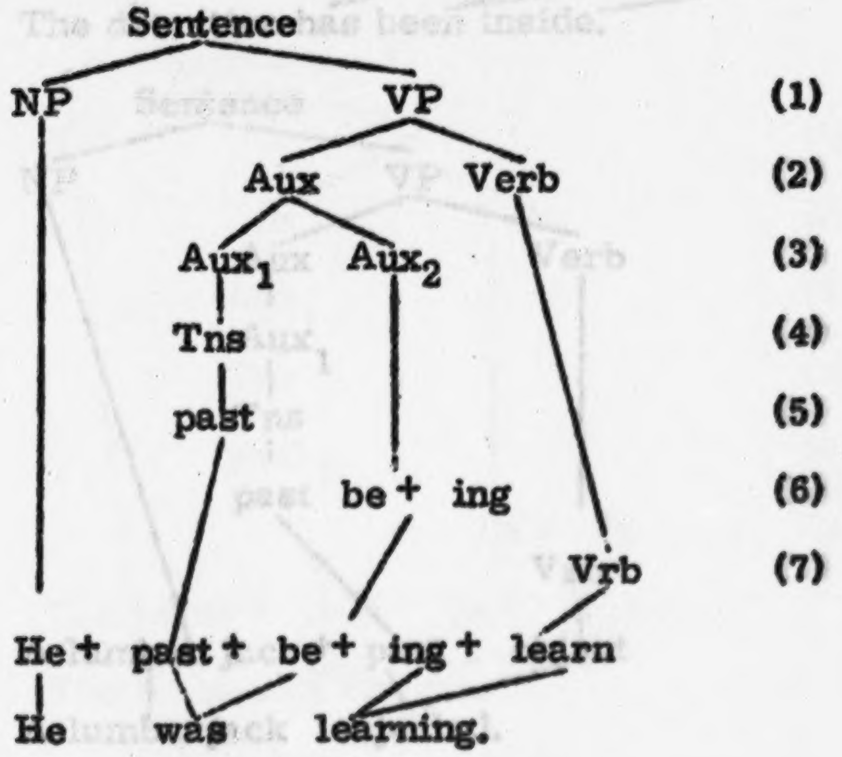
3.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
pres
(5)
Be + Pr
(7)
Mr. Biggs + pres + be + aristocrat.
Mr. Biggs is an aristocrat.

4.


Sentence
NP
VP
Aux
Verb
Aux$_1$
Aux$_2$
Tns
Past
have + en
Vrb
(1)
(2)
(3)
(4)
(5)
(6)
(7)
The child + past + have + en + forget
The child had forgotten.

5.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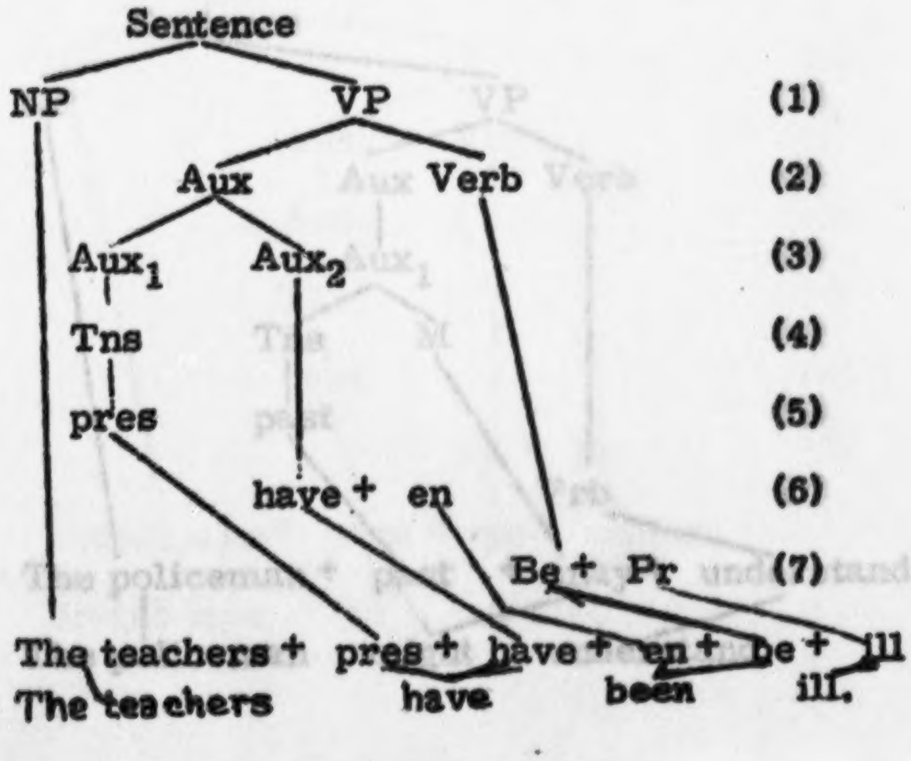
NP
VP
Aux
Verb
Aux$_1$
Aux$_2$
Tns
past
be + ing
Vrb
(1)
(2)
(3)
(4)
(5)
(6)
(7)
He + past + be + ing + learn
He was learning.

6.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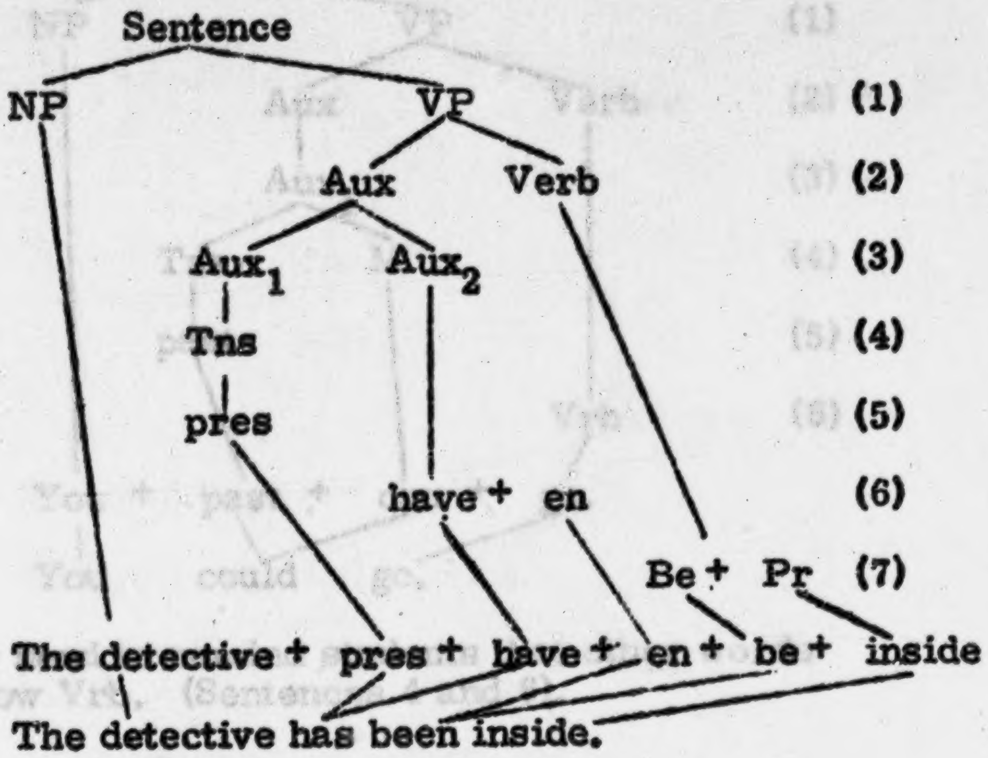
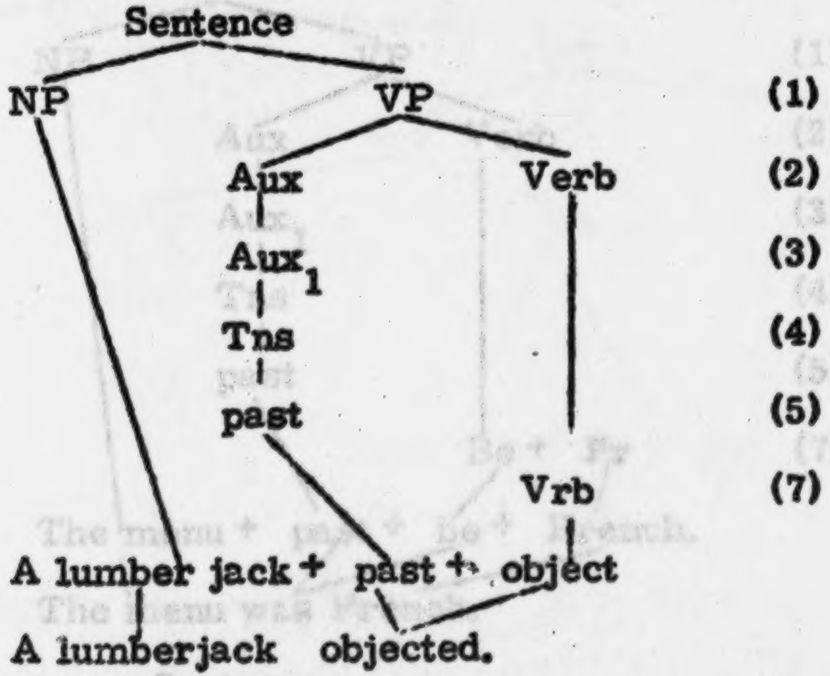
NP
VP
Aux
Verb
Aux$_1$
Aux$_2$
Tns
pres
have + en
Be + Pr
(1)
(2)
(3)
(4)
(5)
(6)
(7)
The teachers + pres + have + en + be + ill
The teachers have been ill.

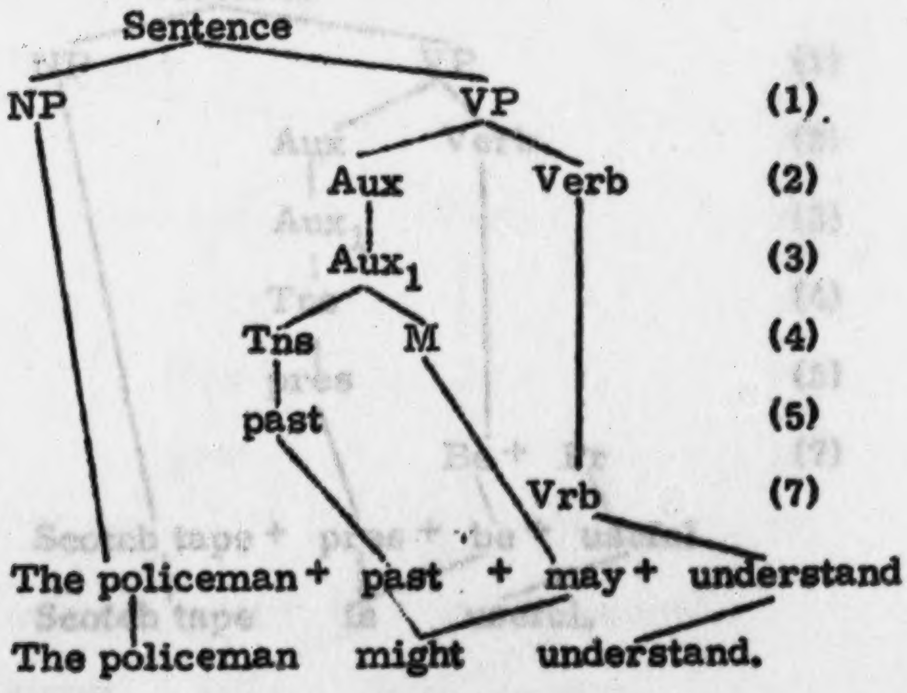
7.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
pres
(5)
have + en
(6)
Be + Pr
(7)
The detective + pres + have + en + be + inside
The detective has been inside.

8.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Vrb
(7)
A lumber jack + past + object
A lumberjack objected.

9.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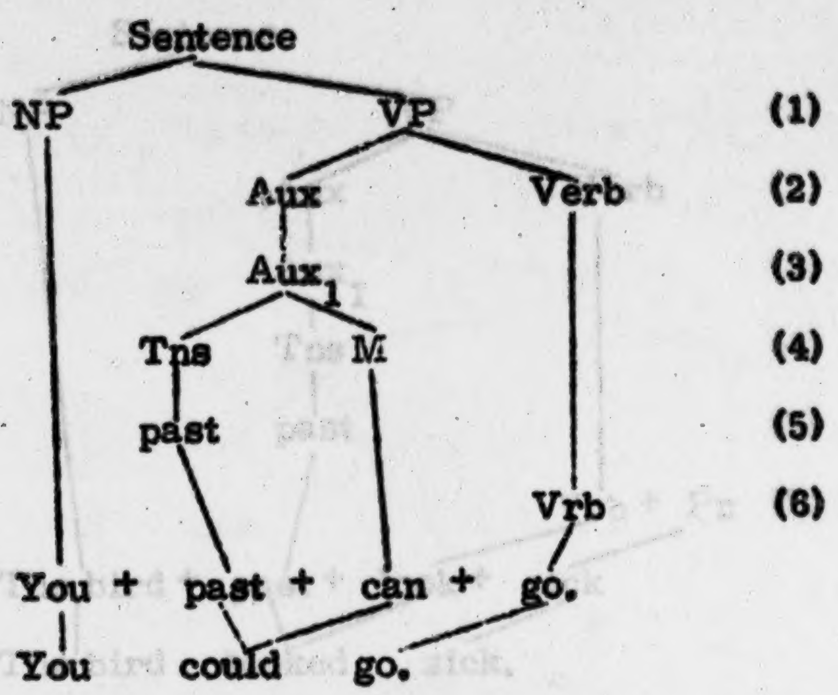
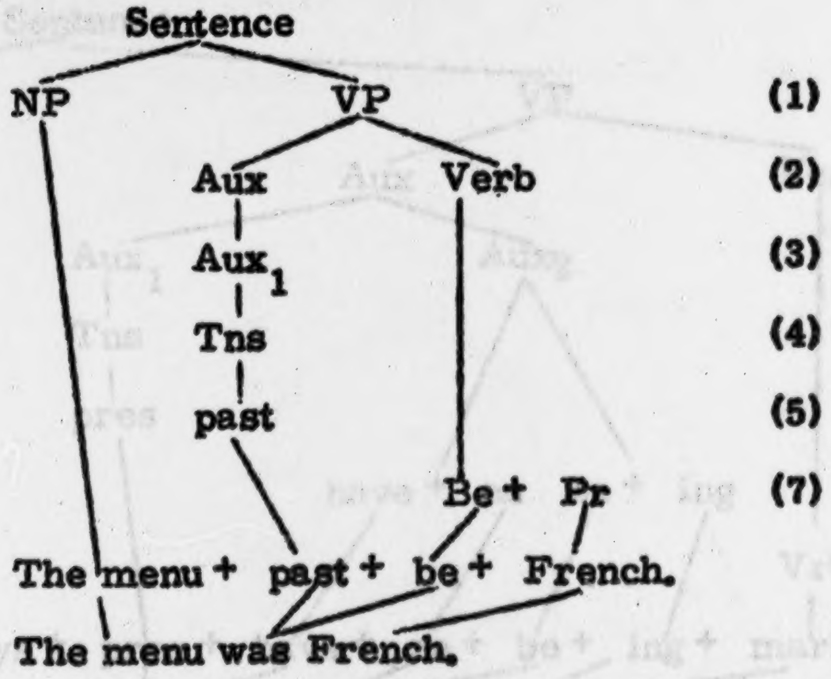
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
M
(4)
past
(5)
Vrb
(7)
The policeman + past + may + understand
The policeman might understand.

10.

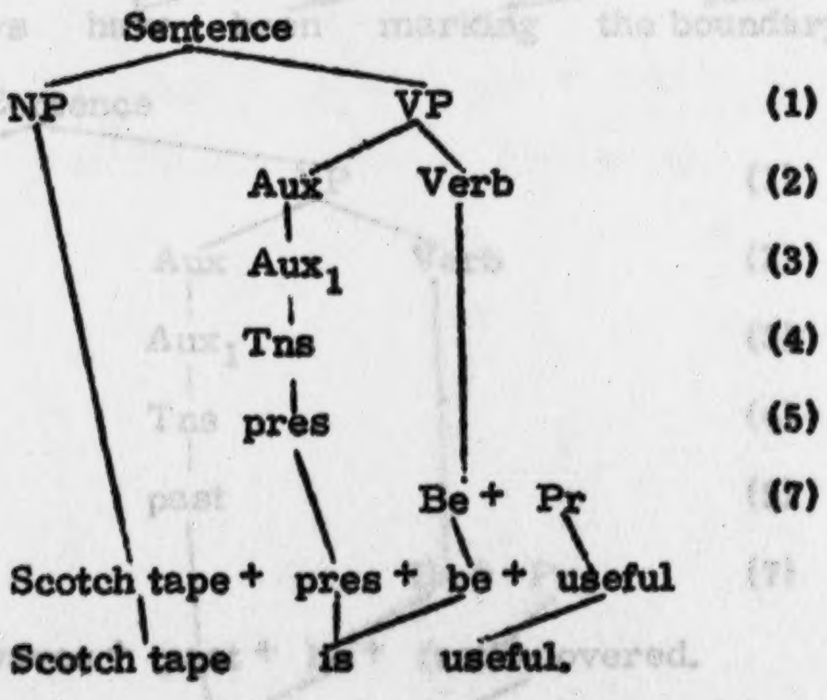

Sentence
NP
VP
Aux
Verb
Aux$_1$
Tns
M
past
Vrb
(1)
(2)
(3)
(4)
(5)
(6)
You + past + can + go.
You could go.

B. You may need to remind students that other words may follow Vrb. (Sentences 4 and 6).

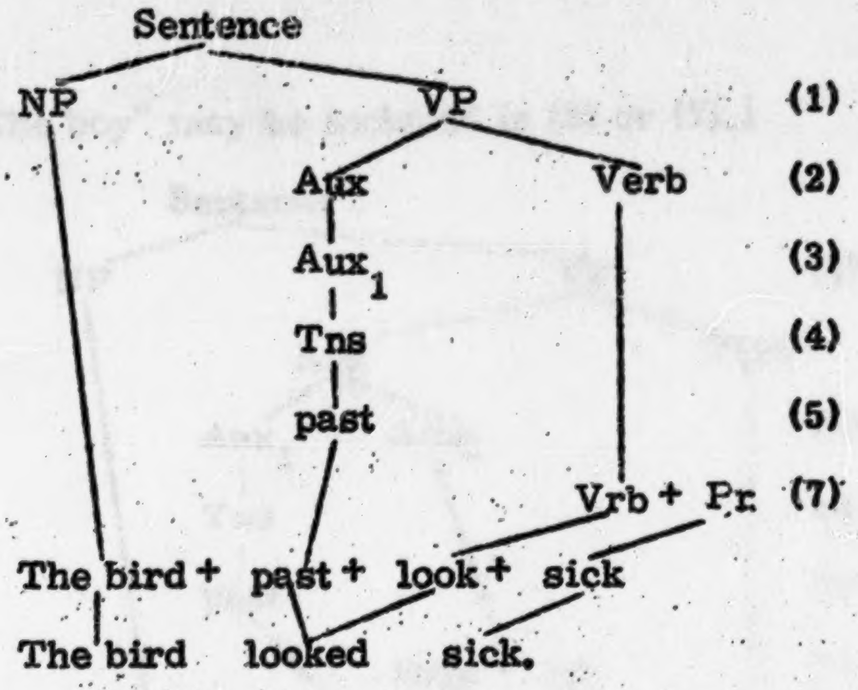
1.


Sentence
NP
VP
Aux
Verb
Aux$_1$
Tns
past
Be + Pr
(1)
(2)
(3)
(4)
(5)
(7)
The menu + past + be + French.
The menu was French.

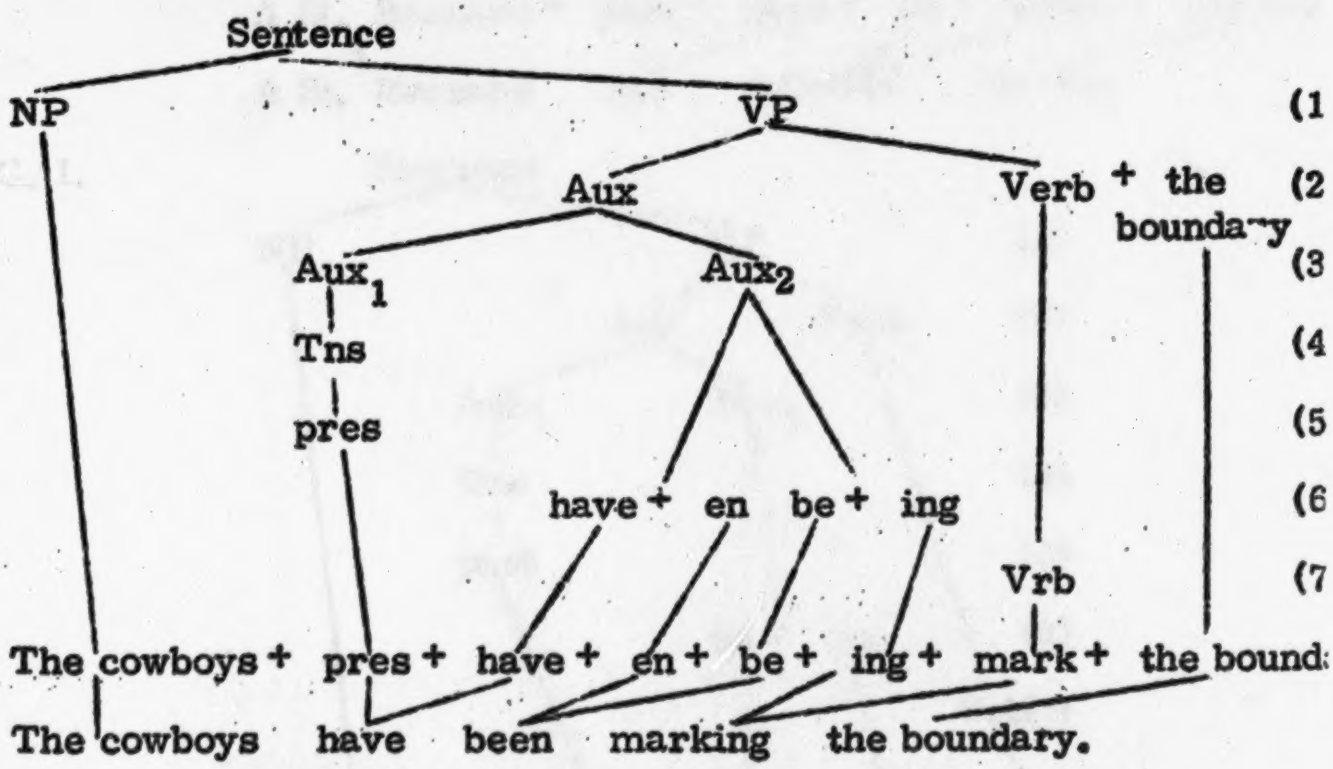
2.


Sentence
NP
VP
Aux
Verb
Aux$_1$
Tns
pres
Be + Pr
(1)
(2)
(3)
(4)
(5)
(7)
Scotch tape + pres + be + useful
Scotch tape is useful.

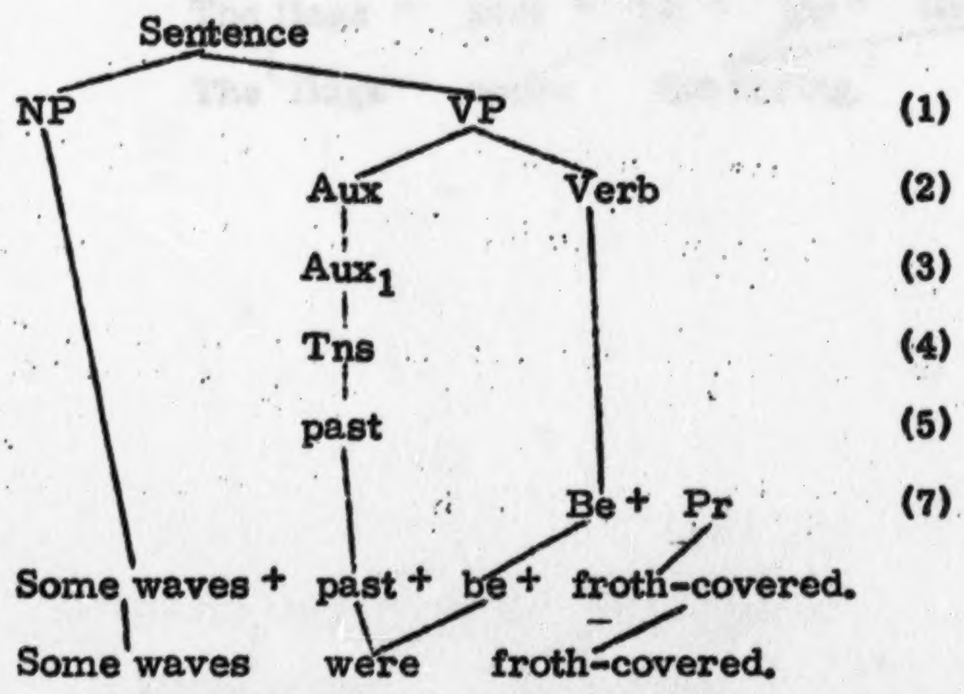
3.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Vrb + Pr
(7)
The bird + past + look + sick
The bird looked sick.

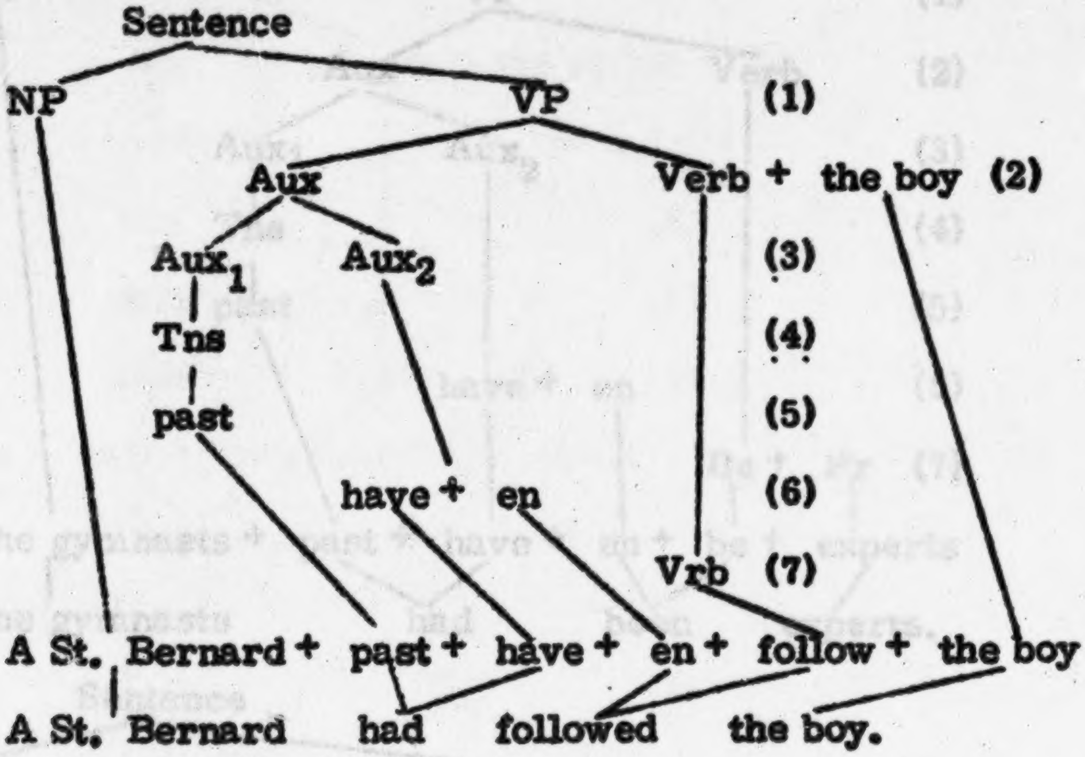
4. ["The boundary" may be added with Verb in (2) or Vrb in (7).


Sentence
NP
VP
(1
Aux
Verb + the boundary
(2
Aux$_1$
Aux$_2$
(3
Tns
(4
pres
(5
have + en be + ing
(6
Vrb
(7
The cowboys + pres + have + en + be + ing + mark + the bound
The cowboys have been marking the boundary.

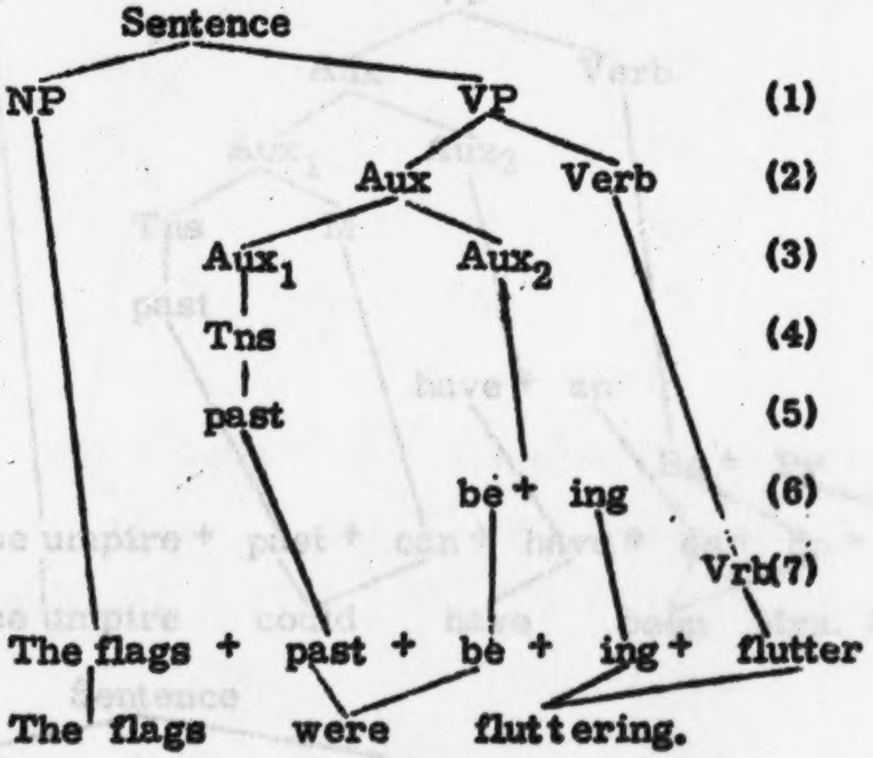
5.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
Be + Pr
(7)
Some waves + past + be + froth-covered.
Some waves were froth-covered.

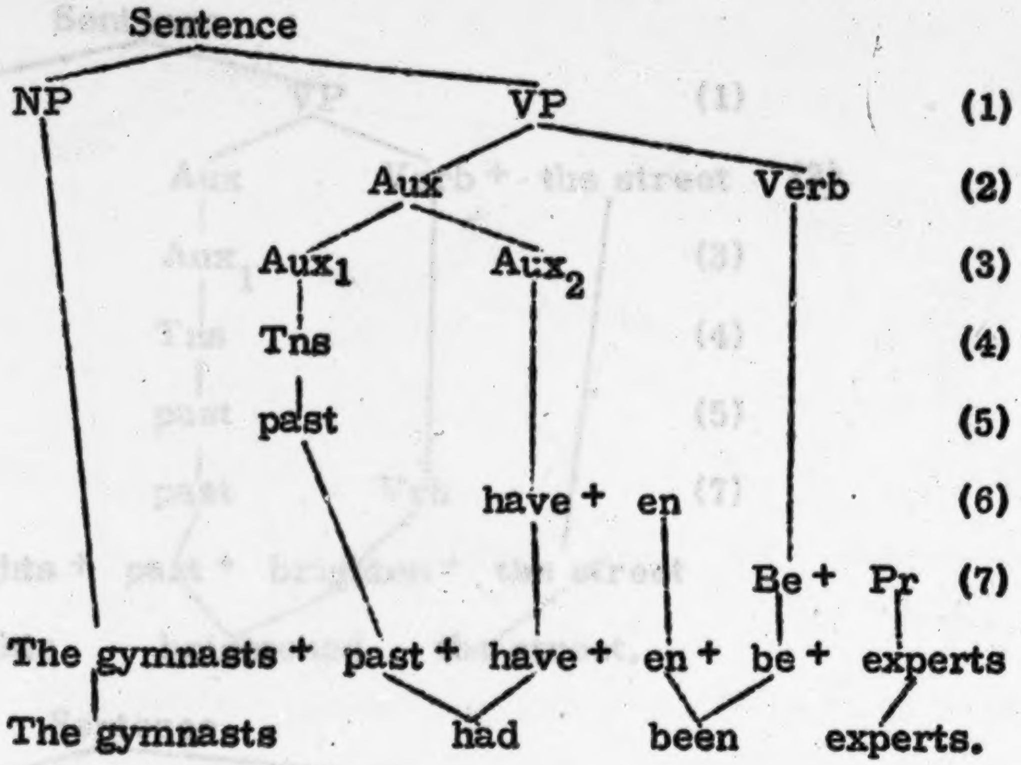
6. ["The boy" may be included in (2) or (7).]


Sentence
NP
VP
(1)
Aux
Verb + the boy
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
have + en
(6)
Vrb
(7)
A St. Bernard + past + have + en + follow + the boy
A St. Bernard had followed the boy.

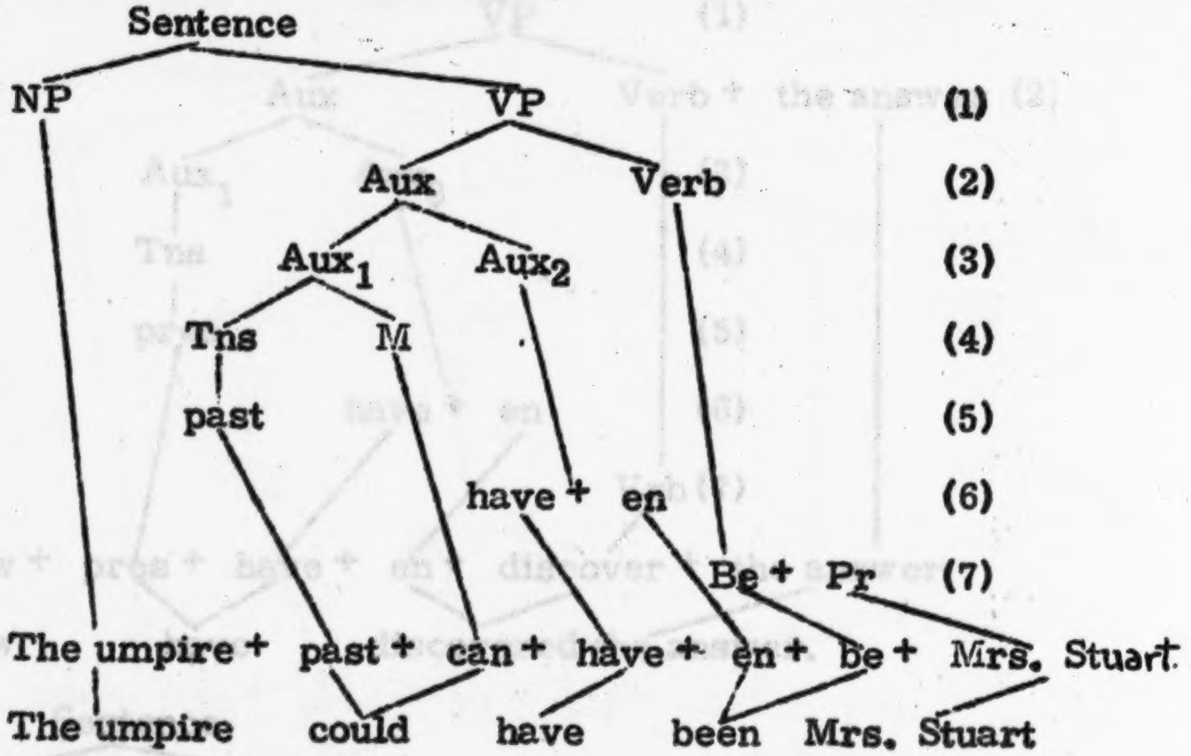
C. 1.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
past
(5)
be + ing
(6)
Vrb
(7)
The flags + past + be + ing + flutter
The flags were fluttering.

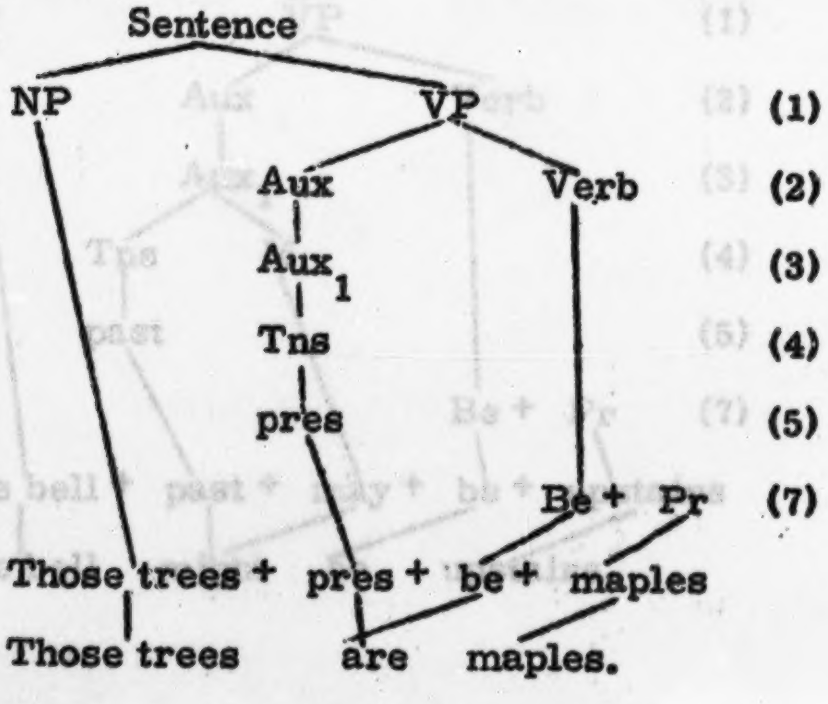
2.


Sentence
NP
VP
Aux
Verb
Aux1
Aux2
Tns
past
have + en
Be + Pr
The gymnasts + past + have + en + be + experts
The gymnasts had been experts.
(1)
(2)
(3)
(4)
(5)
(6)
(7)

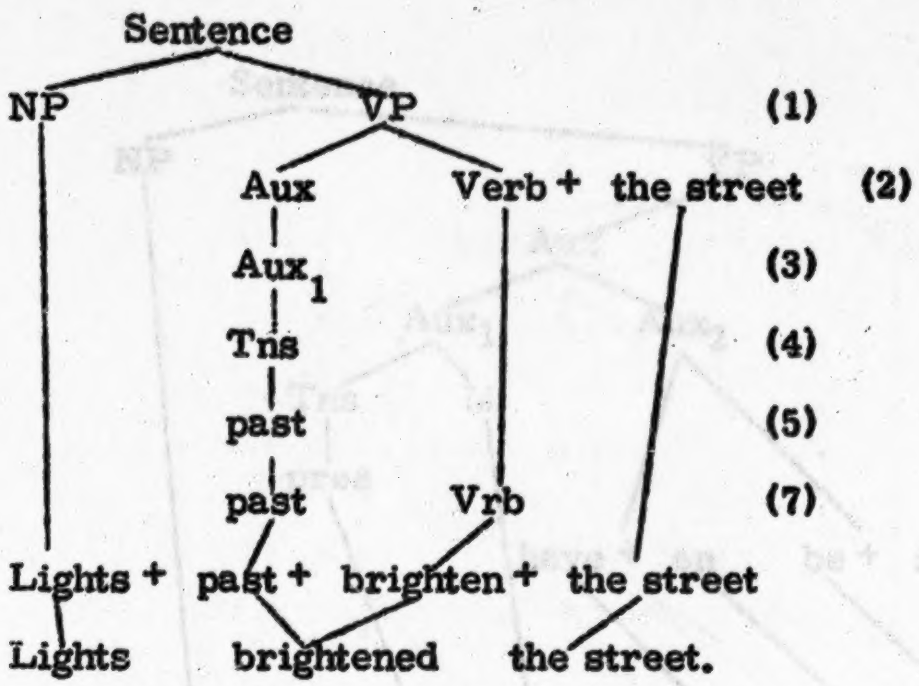
3.


Sentence
NP
VP
Aux
Verb
Aux1
Aux2
Tns
M
past
have + en
Be + Pr
The umpire + past + can + have + en + be + Mrs. Stuart
The umpire could have been Mrs. Stuart
(1)
(2)
(3)
(4)
(5)
(6)
(7)

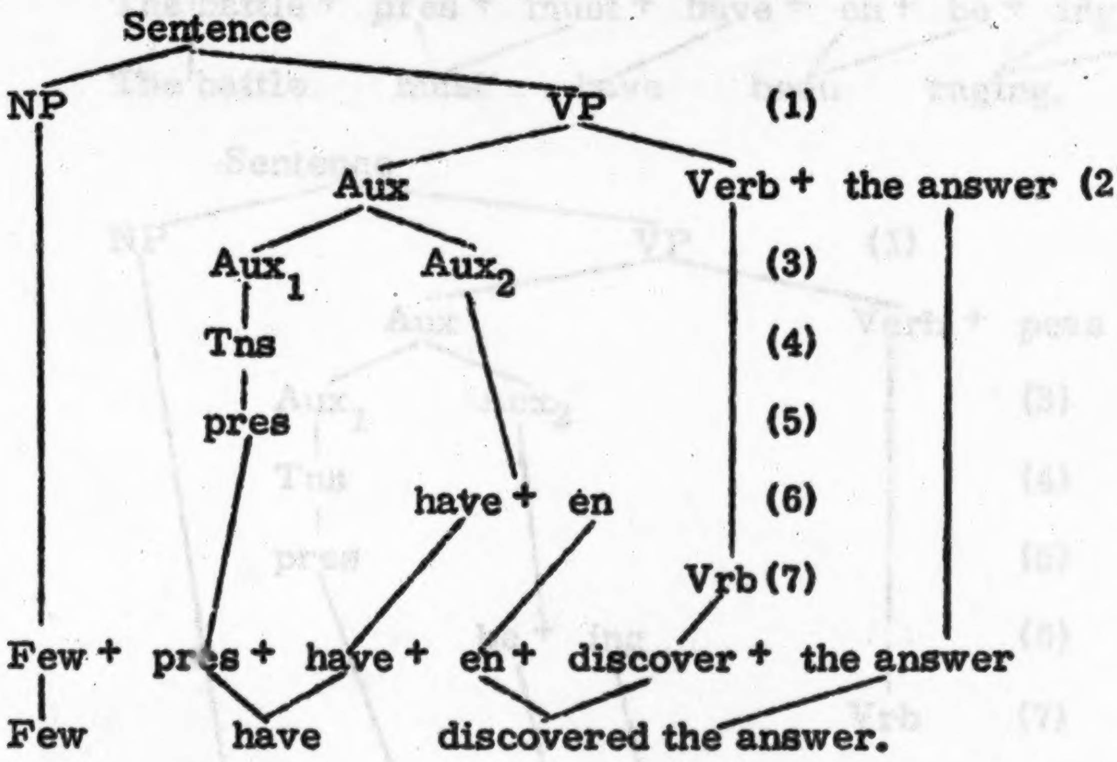
4.


Sentence
NP
VP
Aux
Verb
Aux1
Tns
pres
Be + Pr
Those trees + pres + be + maples
Those trees are maples.
(1)
(2)
(3)
(4)
(5)
(7)

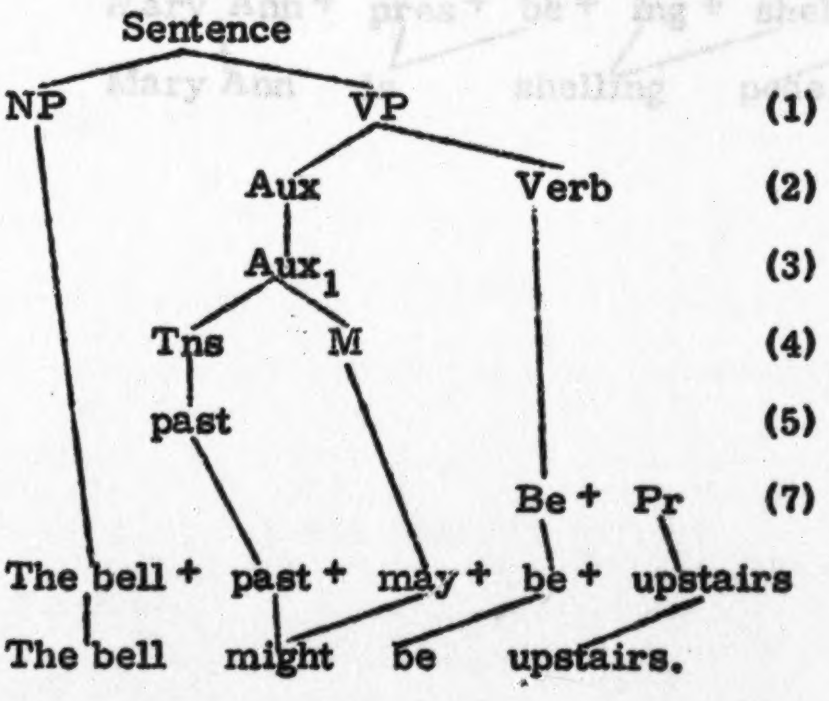
5.


Sentence
NP
VP
(1)
Aux
Verb + the street
(2)
Aux$_1$
(3)
Tns
(4)
past
(5)
past
Vrb
(7)
Lights + past + brighten + the street
Lights brightened the street.

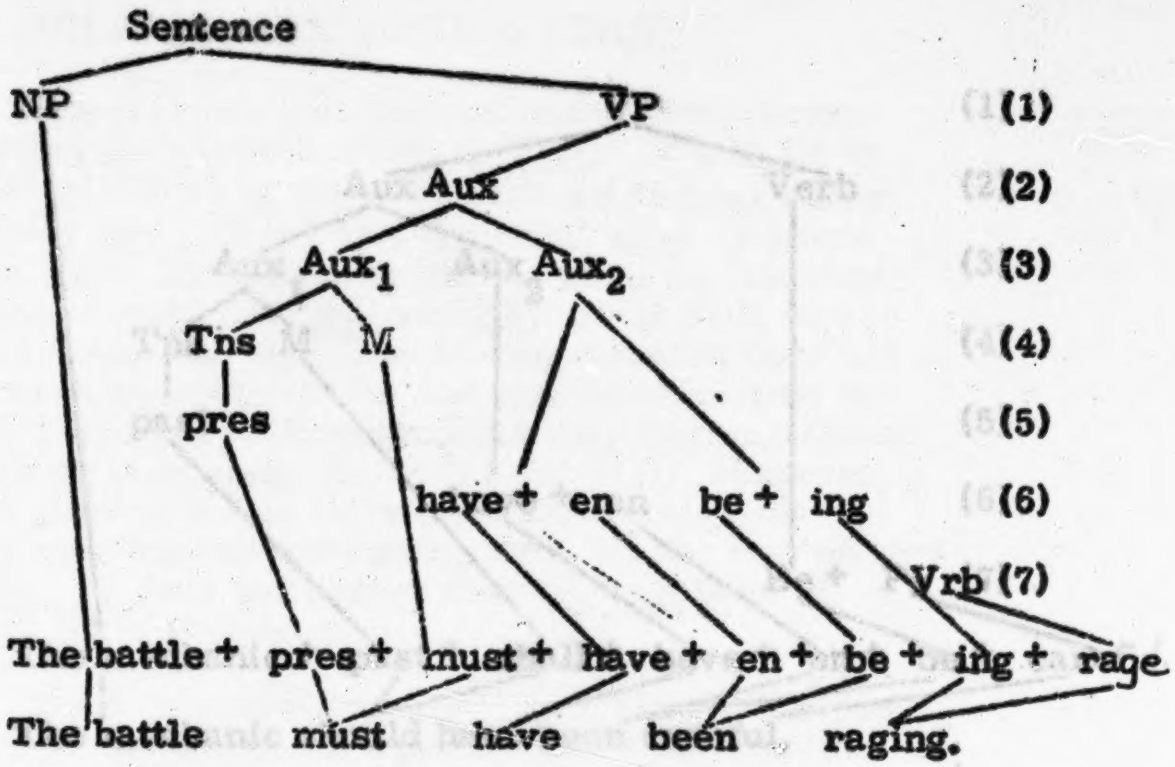
6.


Sentence
NP
VP
(1)
Aux
Verb + the answer
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
pres
(5)
have + en
(6)
Vrb (7)
Few + pres + have + en + discover + the answer
Few have discovered the answer.

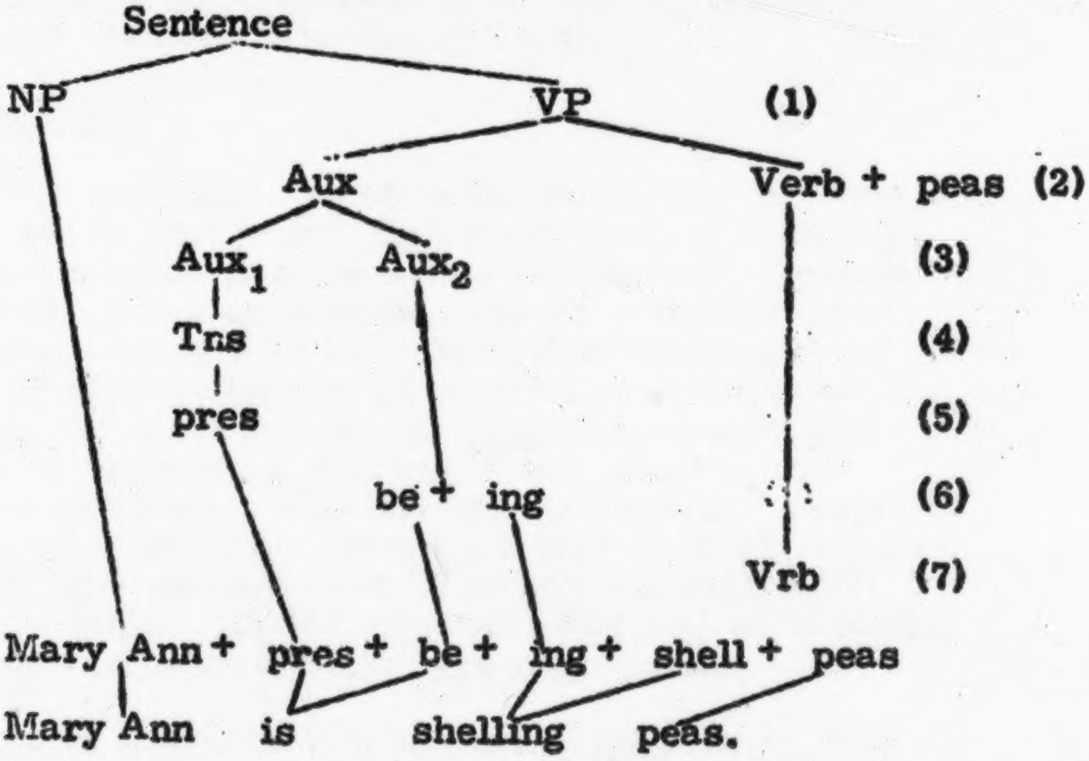
7.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
M
(4)
past
(5)
Be + Pr
(7)
The bell + past + may + be + upstairs
The bell might be upstairs.

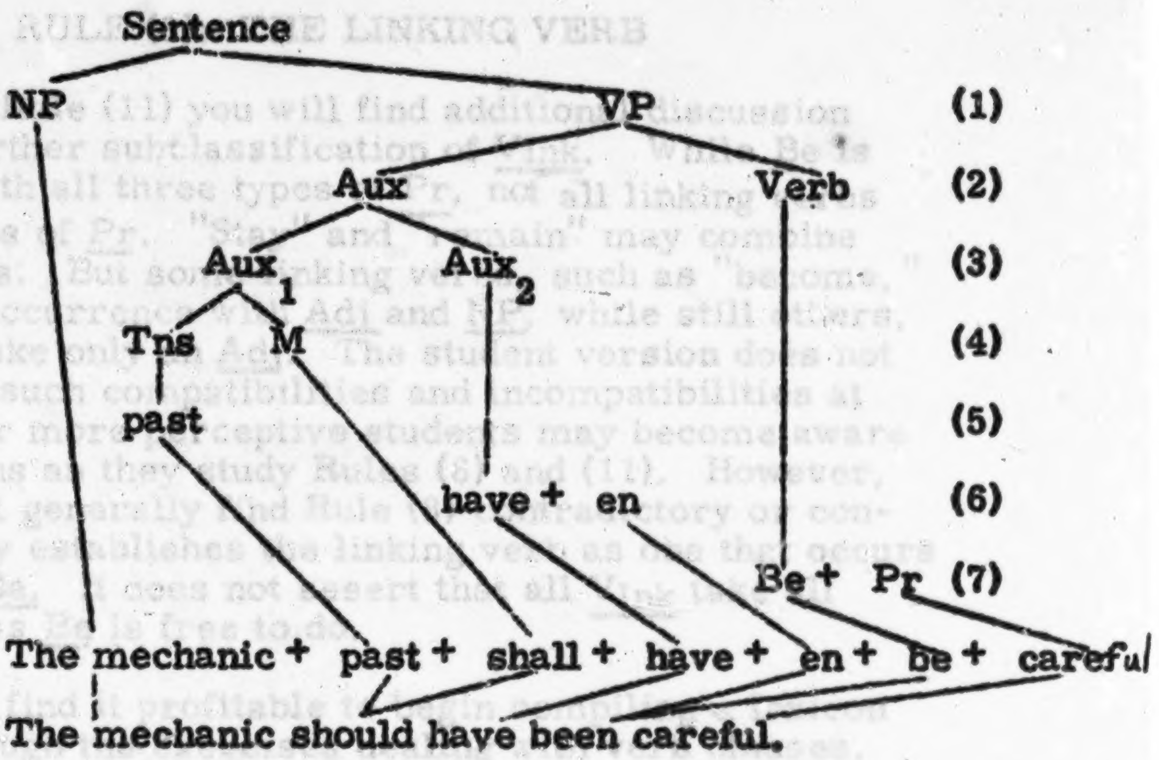
8.


Sentence
NP
VP
(1)
Aux
(2)
Aux$_1$
Aux$_2$
(3)
Tns
M
(4)
pres
(5)
have + en
be + ing
(6)
Vrb
(7)
The battle + pres + must + have + en + be + ing + rage
The battle must have been raging.

9.


Sentence
NP
VP
(1)
Aux
Verb + peas
(2)
Aux$_1$
Aux$_2$
(3)
Tns
(4)
pres
(5)
be + ing
(6)
Vrb
(7)
Mary Ann + pres + be + ing + shell + peas
Mary Ann is shelling peas.

10.


Sentence
NP
VP
Aux
Verb
Aux
1
Aux
2
Tns
M
past
have + en
Be + Pr
(1)
(2)
(3)
(4)
(5)
(6)
(7)
The mechanic + past + shall + have + en + be + careful
The mechanic should have been careful.

RULE [illegible] THE LINKING VERB

In the section for Rule (11) you will find additional discussion of the basis for further subclassification of Vlink. While Be is free to combine with all three types [illegible] Pr, not all linking verbs occur with all types of Pr. "Stay" and "remain" may combine with all three types. But some linking verbs, such as "become," are restricted to occurrence with Adj and NP, while still others, such as "taste," take only an Adj. The student version does not attempt to explain such compatibilities and incompatibilities at this level, but your more perceptive students may become aware of these distinctions as they study Rules (8) and (11). However, students should not generally find Rule [illegible] contradictory or confusing for it simply establishes the linking verb as one that occurs with Pr, as does Be. It does not assert that all Vlink take all three kinds of Pr as Be is free to do.

Many classes may find it profitable to begin compiling a [illegible] while working through [illegible] verb classes. Such a record should help students remember that some words may be found in more than one subclass of verbs.

Exercise 1: Pages 46-47

This exercise has two purposes: to show the similarity between Be and Vlink and to prove that every Vlink must combine with a Pr. If the use of the adverbial of location with a linking verb tends to confuse your students, you may need to point out a further restriction: a verb that occurs with an adverbial of location must be able to occur with another type of Pr as well in order to be classified as a Vlink. In other words, no Vlink occurs with Loc only. It must also be compatible with one of the other types. Thus the verb in the sentence, "The boy ran up the hill," could not be identified as Vlink because, although a student might substitute "was" for "ran" and conclude that "The boy was up the hill," is a reasonable replacement for the original sentence, an attempt to combine "The boy ran" with another type of Pr fails.

Because Sentence 24 in Exercise 1 is somewhat ambiguous, you may wish to omit it from the assignment. The sentence "The snake appeared on the patio" can actually be understood in two ways:

The snake appeared (to be) on the patio. (Vlink)

The snake appeared (came into sight) on the patio. (Vin)

In the first sentence the characteristic to be of some of the linking verbs shows up. To clarify this ambiguity, you might try a question test: the first sentence can only become "Where did he appear to be?" while the second can only become "Where did he appear?"

RULE (8): THE LINKING VERB

In the section for Rule (11) you will find additional discussion of the basis for further subclassification of Vlnk. While Be is free to combine with all three types of Pr, not all linking verbs occur with all types of Pr. "Stay" and "remain" may combine with all three types. But some linking verbs, such as "become," are restricted to occurrence with Adj and NP, while still others, such as "taste," take only an Adj. The student version does not attempt to explain such compatibilities and incompatibilities at this level, but your more perceptive students may become aware of these distinctions as they study Rules (8) and (11). However, students should not generally find Rule (8) contradictory or confusing for it simply establishes the linking verb as one that occurs with Pr, as does Be. It does not assert that all V_{lnk} take all three kinds of Pr as Be is free to do.

Many classes may find it profitable to begin compiling a lexicon while working through the exercises dealing with verb classes. Such a record should help students remember that some words may be found in more than one subclass of verbs.

Exercise 1: Pages 46-47

This exercise has two purposes: to show the similarity between Be and Vlnk and to prove that every Vlnk must combine with a Pr. If the use of the adverbial of location with a linking verb tends to confuse your students, you may need to point out a further restriction: a verb that occurs with an adverbial of location must be able to occur with another type of Pr as well in order to be classified as a Vlnk. In other words, no Vlnk occurs with Loc only; it must also be compatible with one of the other types. Thus the verb in the sentence, "The boy ran up the hill," could not be identified as Vlnk because, although a student might substitute "was" for "ran" and conclude that "The boy was up the hill," is a reasonable replacement for the original sentence, an attempt to combine "The boy ran" with another type of Pr fails.

Because Sentence 24 in Exercise 1 is somewhat ambiguous, you may wish to omit it from the assignment. The sentence "The snake appeared on the patio" can actually be understood in two ways:

The snake appeared (to be) on the patio. (Vlnk)

The snake appeared (came into sight) on the patio. (Vin)

In the first sentence the characteristic to be of some of the linking verbs shows up. To clarify this ambiguity, you might try a question test: the first sentence can only become "Where did he appear to be?" while the second can only become "Where did he appear?"

1. The iron was hot. (adjective)
2. The cat was a rat. (not a Pr)
3. Everyone is ready. (adjective)
4. The harmonica was flat. (adjective)
5. The soldier was rebellious. (adjective)
6. The soldier was the corner. (not a Pr)
7. Charlie was antagonistic. (adjective)
8. Washington was President for two terms. (noun)
9. Your answers are correct. (adjective)
10. The child was sullen. (adjective)
11. Abraham Lincoln was a martyr. (noun)
12. The new dress was her. (not a Pr)
13. The milk was sour. (adjective)
14. The waiter was the soup. (not a Pr)
15. His reply was true. (adjective)
16. Mr. Jessup was the bell. (not a Pr)
17. The principal was a raise. (not a Pr)
18. The principal was angry. (adjective)
19. The crowd was outside. (adverb)
20. Freddie was uncomfortable. (adjective)
21. John Alden was at home. (adverb)
22. The babysitter was miserable. (adjective)
23. Freddie was his way carefully. (not a Pr)
24. *See the preceding explanation.

Exercise 2: Page 47

There are various possibilities. Here are some.

The coffee smells good.
Ferdinand smelled the flowers.

Our cat gets excited.
Our cat gets mice.

The bells sound loud.
The police sound the alarm.

Time is growing short.
Jake is growing corn.

The chameleon turned red.
Joe turned the corner.

The children feel happy.
The shoppers feel the material.

He looks ill.
He looks at the book.

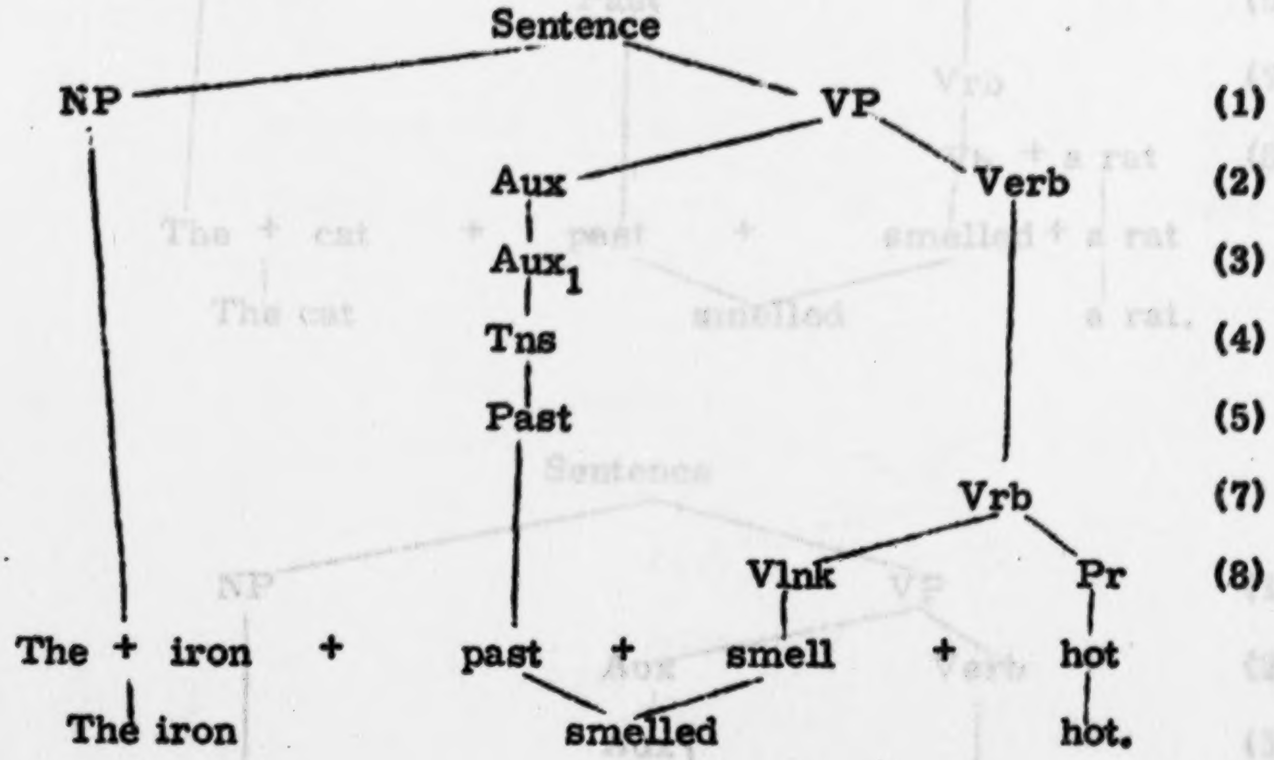
Page 47

The verbs in Exercise 1 which can be replaced by an equal sign are, of course, 8 and 11.

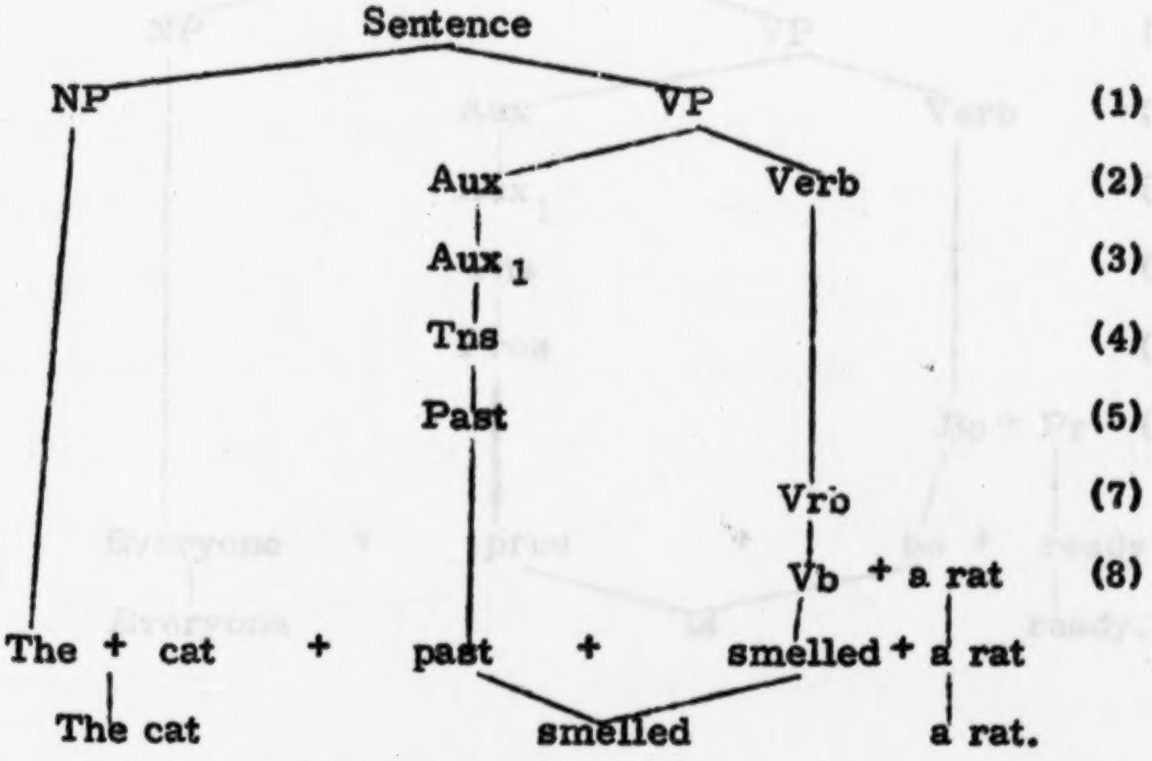
__Exercise 3: Page 48__
This is really an optional exercise. Ask your students to put the symbols above their sentences. Since their sentences will be different, it is not possible to give a key. The purpose of the exercise is to give practice in writing symbol strings and to emphasize the basic form of sentences with Pr's.

__Exercise 4: Page 53__

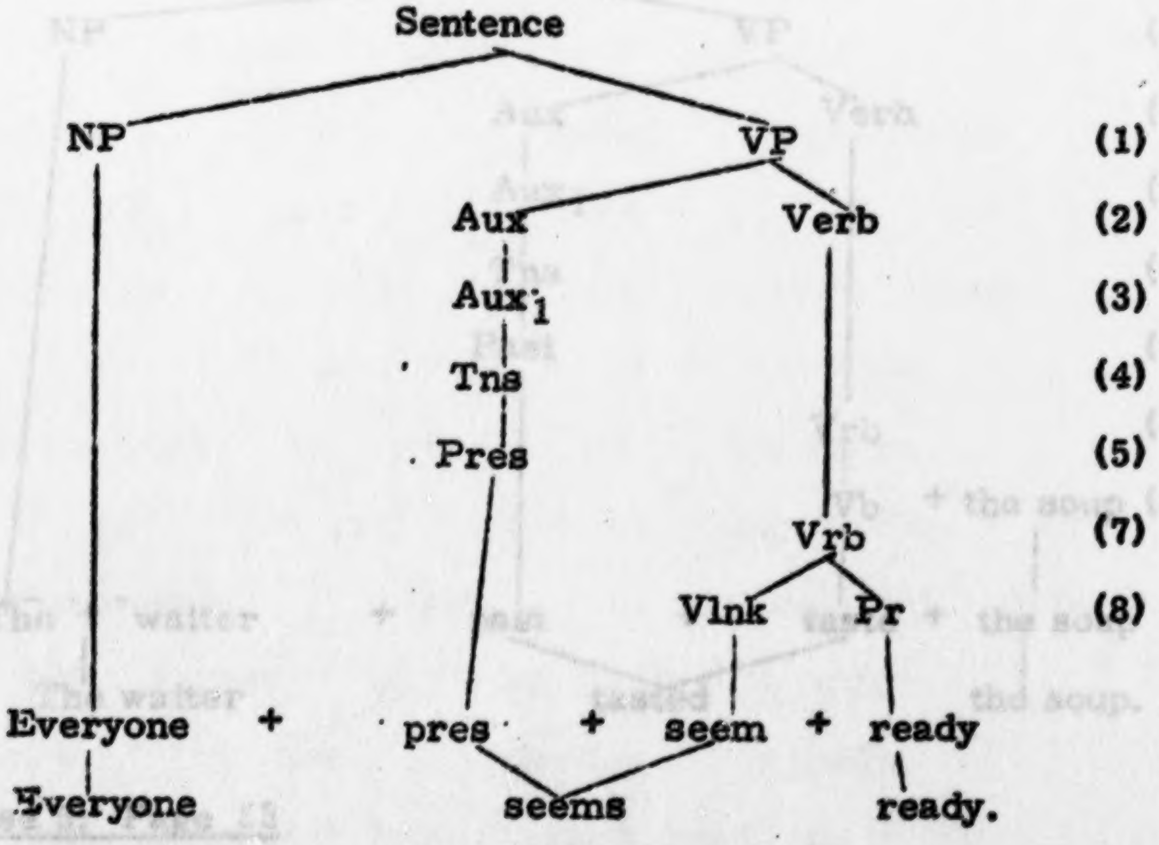
1.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux1
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
The + iron + past + smell + hot
The iron smelled hot.

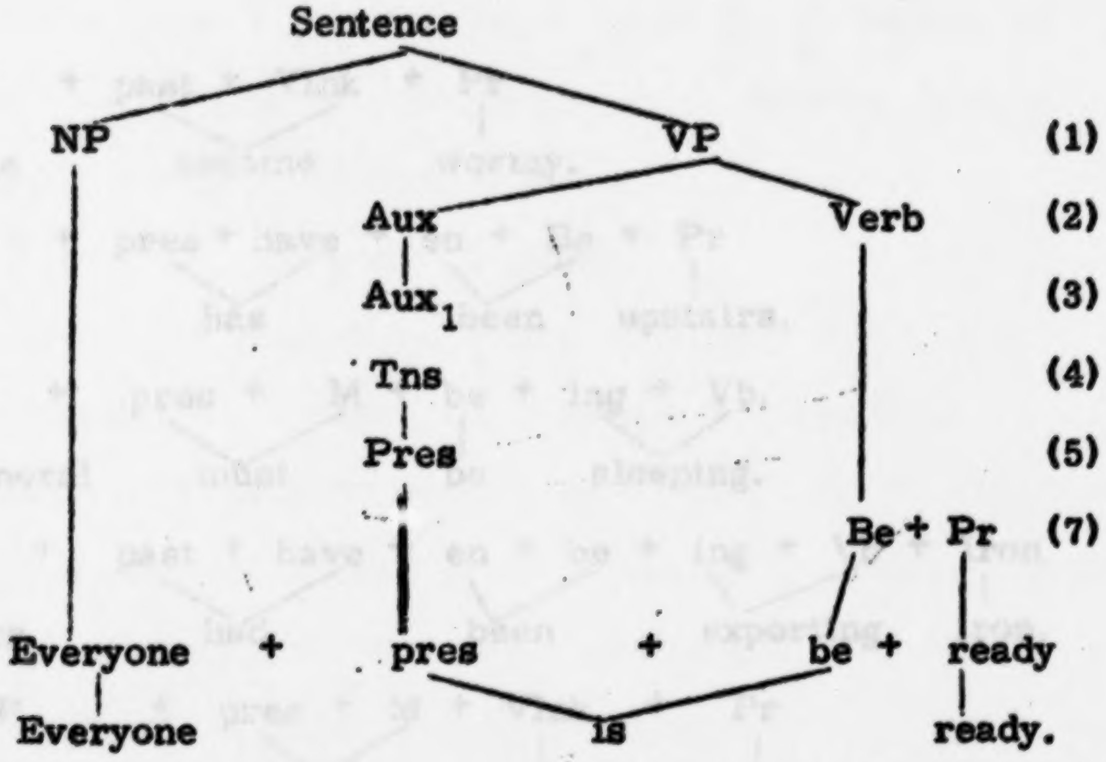
2.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vb + a rat
(8)
The + cat + past + smelled + a rat
The cat
smelled
a rat.

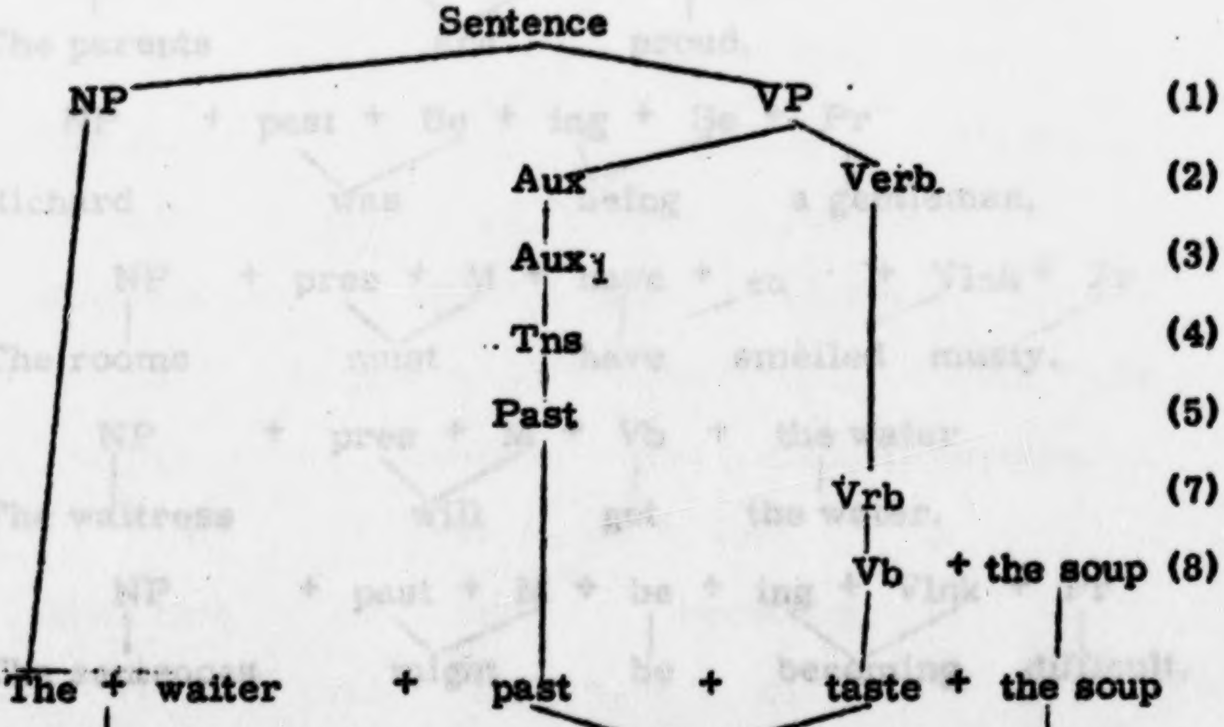
3.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Pres
(5)
Vrb
(7)
Vlnk
Pr
(8)
Everyone + pres + seem + ready
Everyone
seems
ready.

4.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Pres
(5)
Be + Pr
(7)
Everyone + pres + be + ready
Everyone
is
ready.

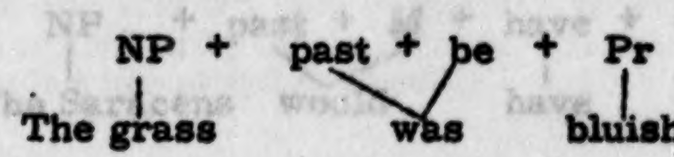
5.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vb + the soup
(8)
The + waiter + past + taste + the soup
The waiter
tasted
the soup.

Exercise 5: Page 63

Students will notice that in the strings now they are able to classify all verbs as Be, Vlnk, or Vb.

A. 1.


NP + past + be + Pr
The grass
was
bluish.

2. NP + past + Vlnk + Pr
An apple became wormy.

3. NP + pres + have + en + Be + Pr
Felix has been upstairs.

4. NP + pres + M + be + ing + Vb.
The general must be sleeping.

5. NP + past + have + en + be + ing + Vb + iron
America had been exporting iron.

6. NP + pres + M + Vlnk + Pr
The buildings will remain dormitories.

7. NP + pres + Be + Pr
The parents are proud.

8. NP + past + Be + ing + Be + Pr
Richard was being a gentleman.

9. NP + pres + M + have + en + Vlnk + Pr
The rooms must have smelled musty.

10. NP + pres + M + Vb + the water
The waitress will get the water.

B. 1. NP + past + M + be + ing + Vlnk + Pr
The sentences might be becoming difficult.

2. NP + past + be + ing + Vb + a party
Henry was having a party.

3. NP + past + have + en + be + ing + Vb
The motor had been vibrating.

4. NP + past + M + have + en + Be + the victors
The Saracens would have been the victors.

5. NP + pres + have + en + be + ing + Vlnk + Pr
Steve has been feeling groggy.

6. NP + past + Vlnk + Pr
The lion seemed gentle.

7. NP + past + be + ing + Vlnk + Pr
The princess was looking radiant.

8. NP + pres + have + en + be + ing + Vlnk + Pr
Fremont has been growing impatient.

9. NP + past + M + Vb + wheat
This soil should grow wheat.

10. NP + past + be + ing + Vb
Someone was looking.

11. NP + pres + be + ing + Vlnk + Pr
The static is getting worse.

12. NP + pres + M + Vb + a pension
Grandfather will get a pension.

13. NP + past + M + have + en + Vlnk + Pr
The film would have become popular.

14. NP + pres + Be + Pr
Some hats are becoming.

15. NP + pres + M + have + en + be + ing + Vlnk + Pr
Judas must have been feeling ashamed.

RULE (9): THE MID VERB

A more rigorous formulation of this subset of verbs would have to take into account that some mid verbs ("resemble," for instance) can be modified by some manner adverbials in sentences like "He resembled his mother closely."

The word mid (=middle) has no particular significance except to indicate that the type is neither fish nor fowl. In Greek grammar the word is used to describe (among other things) a reflexive and irreversible verb mood.

Note the important step in the second part of this rule, the V (Man) part. This of course symbolizes what is left of English verbs after Vmid is subtracted. Interpreted strictly the rule states that Be, Vlnk, and Vmid (the parts we have categorized so far) cannot be modified by a manner adverbial and that all other verbs may be so modified. We have seen however that "resemble," at least, among the mid verbs can occur with a manner adverbial. For example, we might say "He became my friend gradually.", but we would never say *"The cake tasted good slowly." (except in an ironic way--where the irony of course results from the breaking of this subtle grammatical restraint.) Some of your better students may want (if they notice the discrepancies of this kind) to try to find a principle behind the presence or absence of manner adverbs with Vlnk. This matter will be taken up formally at a later date. You may need to remind students constantly that this grammar for the first year is a relatively simple one and that the refinements of the language will be taken up in later years.

Page 55

Many students will find the passive construction difficult at first. Because they must understand this basic test for mid verb (and later the resulting transformation) you may need to help them discover the three changes that automatically result when they attempt to change sentences from the active to passive: NP^2 moves to the initial position in the sentence, the auxiliary be is added to the verb, and by combines with the original NP^1 at the end of the sentence. Point out also that they should not change the tense of the verb when they transform the active into the passive.

2. The furniture was ordered by Prudence.

3. The house is owned by Leland.

4. The laws are made by the government.

5. The grain was stacked by the workmen.

6. Much confusion was caused by a few birds.

Exercise 1: Page 56

The sentences in A provide an opportunity for the student to transform active verbs into passive forms. While all students could reasonably be expected to do A with little difficulty, some sentences in B are extremely complicated, involving the passive of the progressive in the future and perfect tenses, and may pose real problems for most groups. (Sentences 4, 5, 6, 7, and 8 fall in this class. Capable students might find them challenging, however, once they notice the interesting patterns that are set up by a strict adherence to the auxiliary pattern of the active verb.) You will probably need to remind them that the passive is a transformation, not a kernel sentence, but this exercise should help them understand the validity of such reasoning.

Exercise 1: Page 56

A. 1. NP^1 + Vb + NP^2. NP^2
The secretary typed the letter. The letter
Vb + NP^1
was typed by the secretary.

2. NP^1 + Vb + NP^2 NP^2 + Vb
Sammy played the guitar. The guitar was played
+ NP^1
by Sammy.

3. NP^1 + Vb + NP^2 NP^2 + Vb
Twelve men guard the palace. The palace is guarded
+ NP^1
by twelve men.

4. NP^1 + Vb + NP^2 NP^2 + Vb
The custodians emptied the pool. The pool was emptied
+ NP^1
by the custodians.

5. NP^1 + Vb + NP^2 NP^2
Rick carries Marsha's books. Marsha's books
+ Vb + NP^1
are carried by Rick.

6. NP^1 + Vb + NP^2. NP^2 + Vb
Snow blocked the entrance. The entrance was blocked
+ NP^1
by snow.

7. NP^1 + Vb + NP^2 NP^2 +
The waterfall drowned out our voices. Our voices
Vb + NP^1
were drowned out by the waterfall.

8. NP^1 + Vb + NP^2 NP^2 +
Some people will believe you. You
Vb NP^1
will be believed by some people.

9. NP^1 + Vb + NP^2 NP^2 +
The girl forgot the library book. The library book
Vb + NP^1
was forgotten by the girl.

10. NP^1 + Vb + NP^2
The wrecking crew demolished the building.
NP^2 + Vb + NP^1
The building was demolished by the wrecking crew.

11. NP^1 + Vb + NP^2
The counterfeiters must have printed these bills.
NP^2 + Vb + NP^1
These bills must have been printed by the counterfeiters.

12. NP^1 + Vb + NP^2
Ninth graders should set an example.
NP^2 + Vb + NP^1
An example should be set by ninth graders.

B. 1. NP^1 + Vb + NP^2 NP^2
The gypsies were telling fortunes. Fortunes
+ Vb + NP^1
were told by the gypsies.

2. NP^1 + Vb + NP^2 NP^2
The witness raised a question A question
+ Vb + NP^1
was raised by the witness.

3. NP^1 + Vb + NP^2 NP^2
Father could have used the paddle. The paddle
+ Vb + NP^1
could have been used by father.

# 4. NP^1 + Vb + NP^2 NP^2
Aunt Mary was watching the television. The television
+ Vb + NP^1
was being watched by Aunt Mary.

#5. NP^1 + Vb + NP^2 NP^2
A map should show the boundaries. The boundaries
+ Vb + NP^1
should be shown by the map.

#6. NP^1 + Vb + NP^2 NP^2
The fire might be killing the animals. The animals
+ Vb + NP^1
might be being killed by the fire.

#7. NP^1 + Vb + NP^2 NP^2
Erosion must be destroying the land. The land
+ Vb + NP^1
must be being destroyed by erosion.

#8. NP^1 + Vb + NP^2 NP^2
The boys had been swapping pencils. Pencils
+ Vb + NP^1
had been being swapped by the boys.

9. NP^1 + Vb + NP^2 NP^2

Elephants could have pulled the wagons. The wagons

+ Vb + NP^1

could have been pulled by the elephants.

10. NP^1 + Vb + NP^2 NP^2

Someone should have forwarded the letter. The letter

+ Vb + NP^1

should have been forwarded by someone.

11. NP^1 + Vb + NP^2 NP^2

Some doctors prescribe aspirin. Aspirin

+ Vb + NP^1

is prescribed by some doctors.

12. NP^1 + Vb + NP^2 NP^2

The Flea Market may sell antiques. Antiques

+ Vb + NP^1

may be sold by the Flea Market.

Pages 56-57

The assumption that most students will automatically classify all sentences containing mid verbs used in the passive as not grammatical is not completely realistic. Masters as they are of the passive construction resulting from their use of "got," many of your students may be unfamiliar with any use of the passive formed with "be." After students work through the two remaining subclasses of verbs (transitive and intransitive) in Rule 10, they should find Vmid easier to identify. Assure them that they will understand it better later on.

*2. Ten dollars is cost by the coat.

*3. Seventy pounds is weighed by the bell.

*4. His father is resembled by Bob.

*5. A cover is lacked by this book.

*6. Courage is taken by that act.

*7. Fair weather is meant by a red sunset.

*8. Waste is made by haste.

Exercise 2: Page 57

1. eluded (V) has an NP^2, and can go through the passive transformation.

2. has (Vmid) has a NP^2 but does not go through passive.

3. composed (V) goes into a passive transformation.

4. lacked (Vmid)

5. needed (V)

6. weighs (Vmid) Considered together, Sentences 6 and 7

7. weighed (V) show that some verbs which look alike

8. mixed (V) are really two different verbs.

9. resembles (Vmid)

10. means (Vmid)

11. befell (Vmid)

12. answered (V)

13. dominated (V)

14. must have been caught (V)

15. damaged (V)

Exercise 3: Pages 58-59

The sentences in A review the three verb classes and let the student test his skill in recognizing Be, Vlnk, and Vmid. In B the student faces sentences which contain V + NP^2, the subclass that he will eventually identify as transitive verbs in Rule 10.

A. 1. NP + pres + have + en + Be + Pr
A dog has been our mascot.

2. NP + past + be + ing + Vlnk + Pr
The speaker was becoming hoarse.

3. NP + pres + M + have + en + Be + Pr
A boat must have been the home.

4. NP + past + Vlnk + Pr
The water tasted metallic.

5. NP + past + M + have + en + Vlnk + Pr
Vivian would have felt terrible.

6. NP^1 + past + M + Vmid + NP^2
The story should have suspense.

7. NP^1 + pres + have + en + Vmid + NP^2
The contest has lasted an hour.

8. NP + pres + M + Vlnk + Pr
Ivan will become a scientist.

9. NP^1 + pres + Vmid + NP^2
Fog means danger.

10. NP^1 + past + Vmid + NP^2
The villain resembled a weasel.

11. NP^1 + past + have + en + be + ing + Vmid + NP^2
The basketball team had been lacking spirit.

12. NP + pres + M + Vlnk + Pr
My dog may become angry.

13. NP + pres + have + en + Be + Pr
Sally has been a girl scout.

14. NP^1 + pres + M + Vmid + NP^2
This bridge will cost two million dollars.

15. NP^1 + pres + Vlnk + Pr
Your idea sounds good.

B. 1. NP^1 + pres + Vmid + NP^2
The Boy Scouts lack a leader.

2. NP + pres + Be + Pr
Mrs. Jason is the housekeeper.

3. NP^1 + pres + be + ing + V + NP^2
Some people are taking a vacation.

4. NP^1 + pres + M + be + ing + V + NP^2
The parade will be passing the corner.

5. NP + past + V + Manner
The actors performed skillfully.

6. NP^1 + pres + M + have + en + V + NP^2
The teacher may have scrambled the answers.

7. NP^1 + past + Vlnk + Pr
Lake Louise seemed peaceful.

8. NP^1 + pres + Vmid + NP^2
The principal means business.

Exercise 4: Pages59-60

The strings in A contain the root verb to be used in constructing the sentences. Students would probably profit from classifying these verbs as they consider the sentences written by the class. Regardless of the varying choices of NP and Pr that students will make, the verb should be

A. 1. am, are, or is
2. shall, can, may, or must be
3. had been collecting
4. shall, can, may or must cost
5. had been
6. tasted
7. feels or feel
8. felt
9. am, is, or are going

10. has or have had

B. To do B students must select a suitable verb from the subclass requested in the string before attaching the elements to produce the desired VP. A comparison of the sentences composed by different students for the same string should be stimulating as well as informative.

RULE (10): TRANSITIVE AND INTRANSITIVE VERBS

$$(10)\ V \rightarrow \begin{Bmatrix} V_{tr} + NP \\ V_{in} \end{Bmatrix}$$

Neither V_{tr} nor V_{in} will be further subclassified at this level. But in subsequent units these large subsets of verbs will be broken down into further subsets on the basis of formal grammatical regularities.

Exercise 1: Page 31

These sentences provide an important review of the three subclasses of verbs already considered, but nine of them offer an opportunity to introduce transitive and intransitive verbs inductively.

Verb	Kind
1. was	Be
2. closed	V
3. must have been	Be
4. bowed	V
5. looks	Vlnk
6. became	Vlnk
7. absorbed	V
8. has	Vmid
9. have waxed	V
10. will attract	V

Verb	Kind
11. resembles	Vmid
12. laid	V
13. is preparing	V
14. tossed	V
15. will be waiting	V

Exercise 2: Page 81

(a) Students' sentences will vary but all should contain Vtr + NP^2 + Man.

(b) In assigning this exercise you might want to remind students that here they are simply testing to eliminate any Vmid they may have used in (a).

Exercise 3: Pages 81-82

(a) 1. destroys - Vtr

2. read - Vtr

3. scolded - Vtr

4. became - Vlnk

5. has been shaking

6. cost - Vmid

7. fell

8. must have been collecting - Vtr

9. are - Be

10. could see - Vtr

11. went

12. had lost - Vtr

(b) 1. Men are destroyed by war.

2. The message was read by Tom.

3. He was scolded by his father. (Students will probably be interested in the automatic change of form which results when "him" shifts to the NP^1 position in the passive.)

8. Fossils must have been being collected by Ronald. (Because of the complexity of the auxiliary construction in the original sentence, the passive form may seem awkward to some students. But all of them would probably be ready to accept "Fossils must have been collected by Ronald."

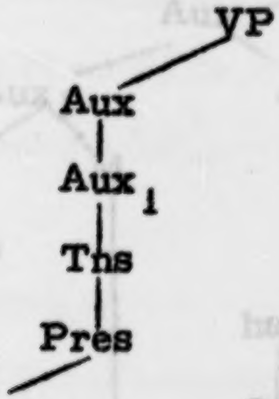
10. Many colors could be seen by us.

12. Umbrellas had been lost by several spectators.

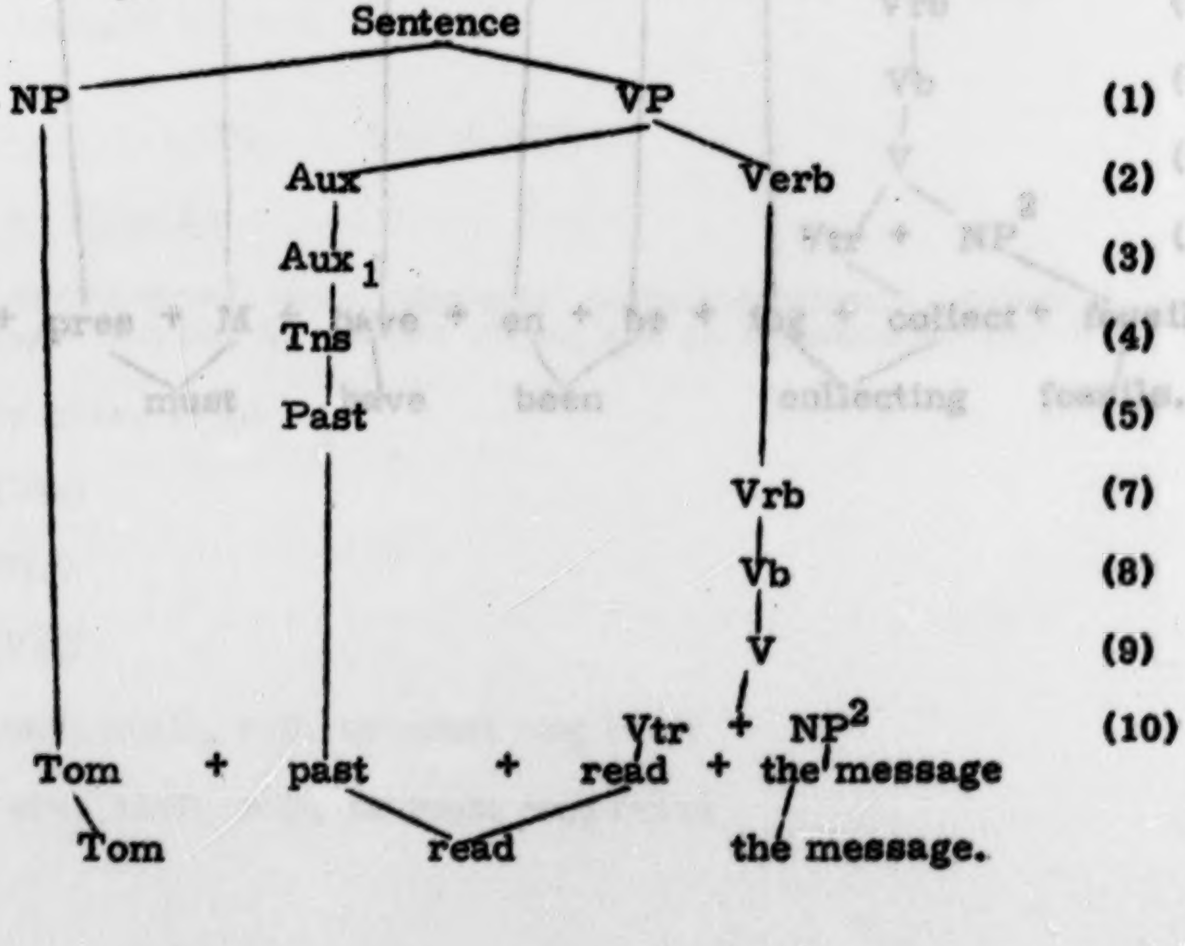
(c) The verbs in Sentences 5, 7, and 11 fit no category discussed thus far because, unlike other verb subclasses, they do not take either Pr or NP^2. You might find this a good time to ask students if they can see now why we initially break a kernel sentence into just two parts, NP + VP. The more perceptive students will realize that the words following the verb help determine the classification of the verb.

Page 62

Two changes will make the branching diagram example more accurate. Tense should be Tns and Pres should be added from Rule 5.


VP
Aux
Aux_1
Tns
Pres

(d) 2.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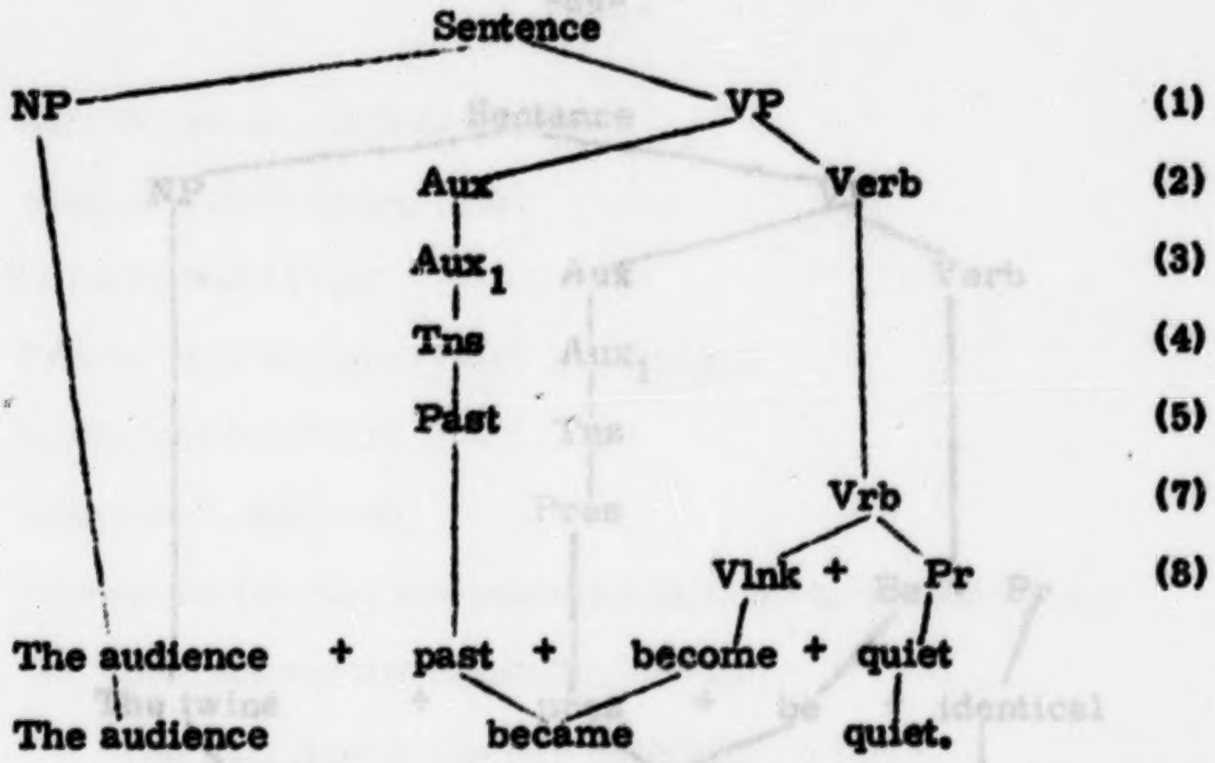
Verb
(2)
Aux_1
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vb
(8)
V
(9)
Vtr + NP^2
(10)
Tom + past + read + the message
Tom read the message.

4.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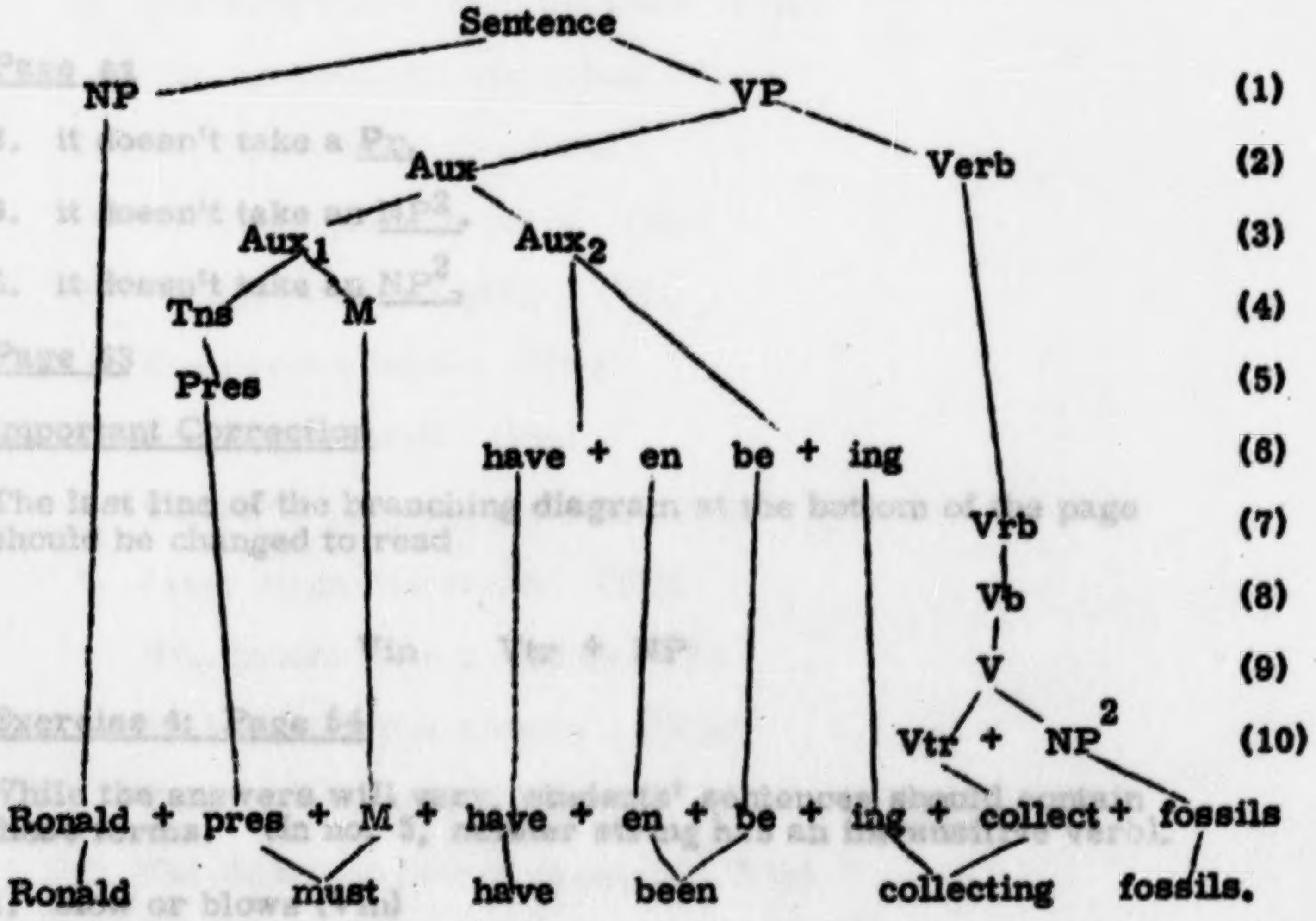
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk + Pr
(8)
The audience + past + become + quiet
The audience became quiet.

8.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Aux$_2$
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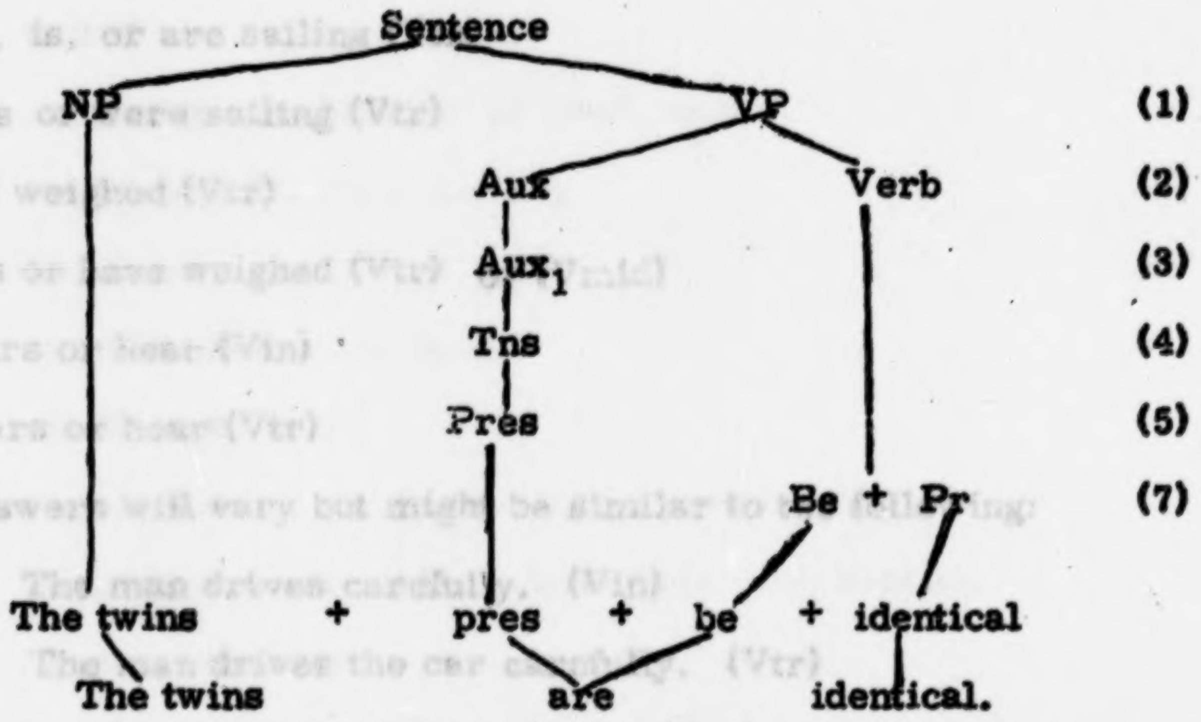
M
(4)
Pres
(5)
have + en be + ing
(6)
Vrb
(7)
Vb
(8)
V
(9)
Vtr + NP^2
(10)
Ronald + pres + M + have + en + be + ing + collect + fossils
Ronald must have been collecting fossils.

9.


Sentence
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VP
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Pres
(5)
Be + Pr
(7)
The twins + pres + be + identical
The twins
are
identical.

Page 62

2. it doesn't take a Pr.

3. it doesn't take an NP^2.

4. it doesn't take an NP^2.

Page 63

Important Correction

The last line of the branching diagram at the bottom of the page should be changed to read

Vin Vtr + NP

Exercise 4: Page 64

While the answers will vary, students' sentences should contain these forms: (In no. 5, neither string has an intransitive verb).

1. blow or blows (Vin)

blew (Vtr)

2. flew (Vtr)

flew (Vin)

3. may, can, shall, will, or must ring (Vtr)

may, can, shall, will, or must ring (Vin)

4. am, is, or are sailing (Vin)

was or were sailing (Vtr)

5. had weighed (Vtr)

has or have weighed (Vtr) or (Vmid)

6. hears or hear (Vin)

hears or hear (Vtr)

B. Answers will vary but might be similar to the following:

1. The man drives carefully. (Vin)

The man drives the car carefully. (Vtr)

2. The hoop rolled down the road. (Vin)

The man rolled a cigarette. (Vtr)

3. I will plan carefully. (Vin)

They will plan the party. (Vtr)

4. The girl writes legibly. (Vin)

She wrote a letter. (Vtr)

5. Tom throws well. (Vin)

Tom was throwing the ball. (Vtr)

6. Jenny sings beautifully. (Vin)

The chorus sang a medley. (Vtr)

7. We looked at the material. (Vin)

John looked sick. (Vlnk)

8. The Russians danced daringly. (Vin)

They danced the twist. (Vtr)

Exercise for Review: Page 35

A. While students' answers will necessarily vary, they should contain these verb forms:

1. cost or costs

2. talked

3. can, may, shall, will, or must remain

4. could, should, or would run

5. had made

6. is, are, or am smelling

7. smell or smells

8. could, should, might, or would have heard

9. can, may, shall, will or must have been hearing

10. have or has been

B. As this exercise terminates the division of verbs into five subclasses, these strings furnish students with a comprehensive review of the VP part of kernel sentences. Because the sentences constructed by your students will vary considerably, you might use this opportunity to reenforce the notion presented earlier that an infinite number of sentences can result from one string of symbols.

RULE (11): THE PREDICATE

$$\text{(11) Pr} \longrightarrow \begin{Bmatrix} \text{Adj} \\ \text{NP} \\ \text{Loc} \end{Bmatrix}$$

At some later time the rules will have to be refined to indicate that the N^o of the predicate NP is dependent on the subject NP. As the rules are here formulated it would be quite possible to come up with clearly ungrammatical sentences. For example:

> *The boys became friend.
> *The boy became friends.

The formal way of stating the grammatical dependencies here is too subtle for presentation at this level. However, the exposition of Rule (7) in the Teacher's Manual presents the problem in an informal way.

In another way this rule is not so closely formulated as it will eventually have to be: for only "stay" and "remain" (among the Vlnk) and Be are free to combine with all three types of Pr. Other Vlnk are limited to occurrence with Adj and NP (for example, "become"), and Adj (such as "taste"), etc. You may need to remind your students of the restriction which we placed on the adverb of location used as Pr (see the exposition of Rule (8) in the Teacher's Manual.)

Exercise 1: Page 67
Sentences 2, 8, 9, and 10 are complete because each contains a Pr.

2. Democrat
8. true
9. larger
10. at home

Exercise 2: Page 68

Students' answers will necessarily vary. To encourage your class to explain the limitations placed upon some Vlnk you might let students experiment by trying to substitute other types of Pr. Thus they could prove that, while Be combines freely with all types of Pr, linking verbs do not.

Exercise 2: Page 69

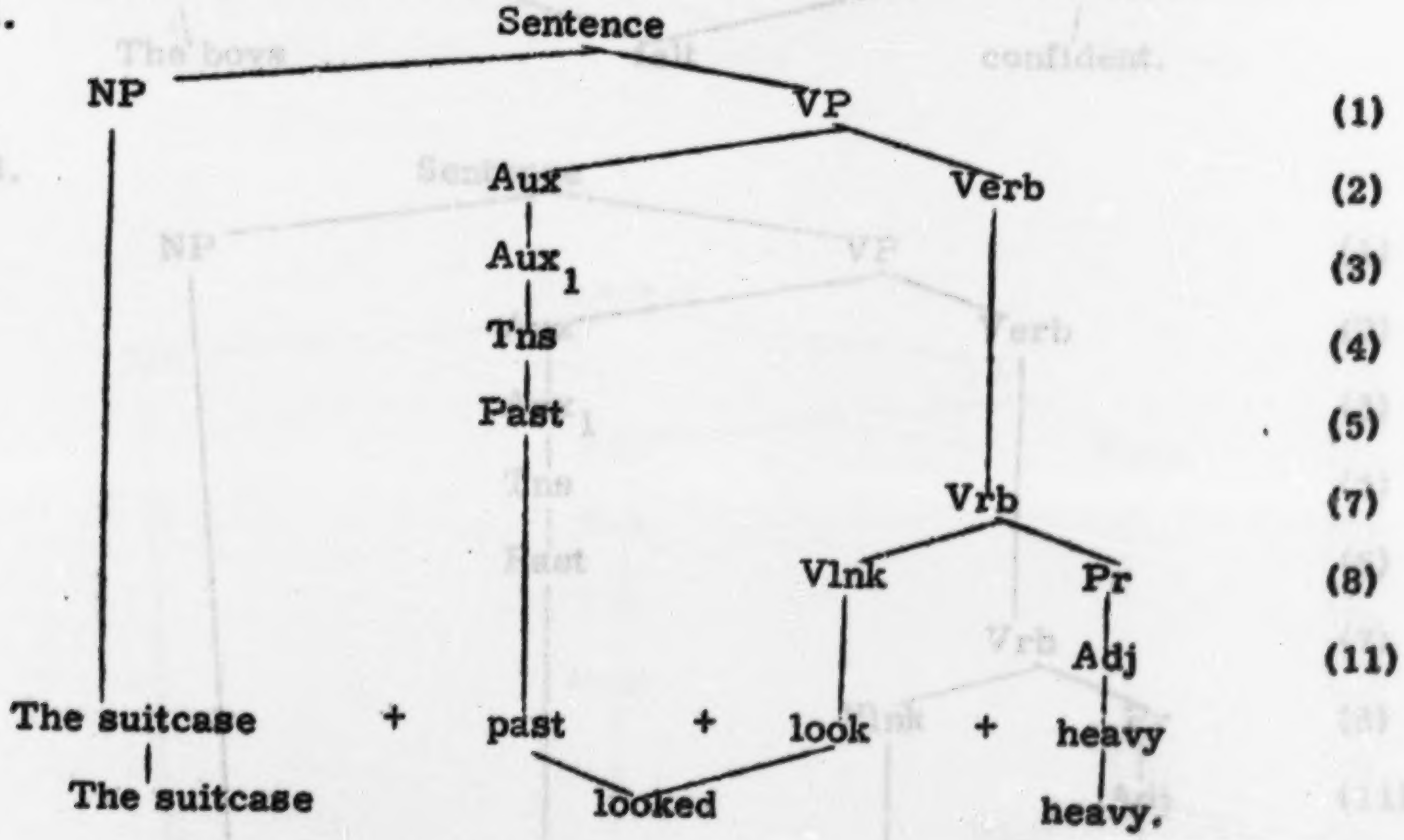
B. 1. heavy - Adj.
   2. confident - Adj

3. quiet - Adj.
4. a scoundrel - NP
5. at anchor - Loc
6. indistinct - Adj.
7. late - Adj.
8. Henry Cabot Lodge - NP
9. in San Francisco - Loc
10. an inventor - NP

Exercise 3: Page 70-71

Since the example of the branching diagram on page 36 is somewhat telescoped, some students may find it confusing. If such a condensation presents problems for any student you may wish to have him follow the earlier procedure of placing each step or rule development on a different line. The diagrams that follow adhere to the more elementary method. Because the emphasis in this exercise is on Rule (11), the sentences have a simple verb construction.

1.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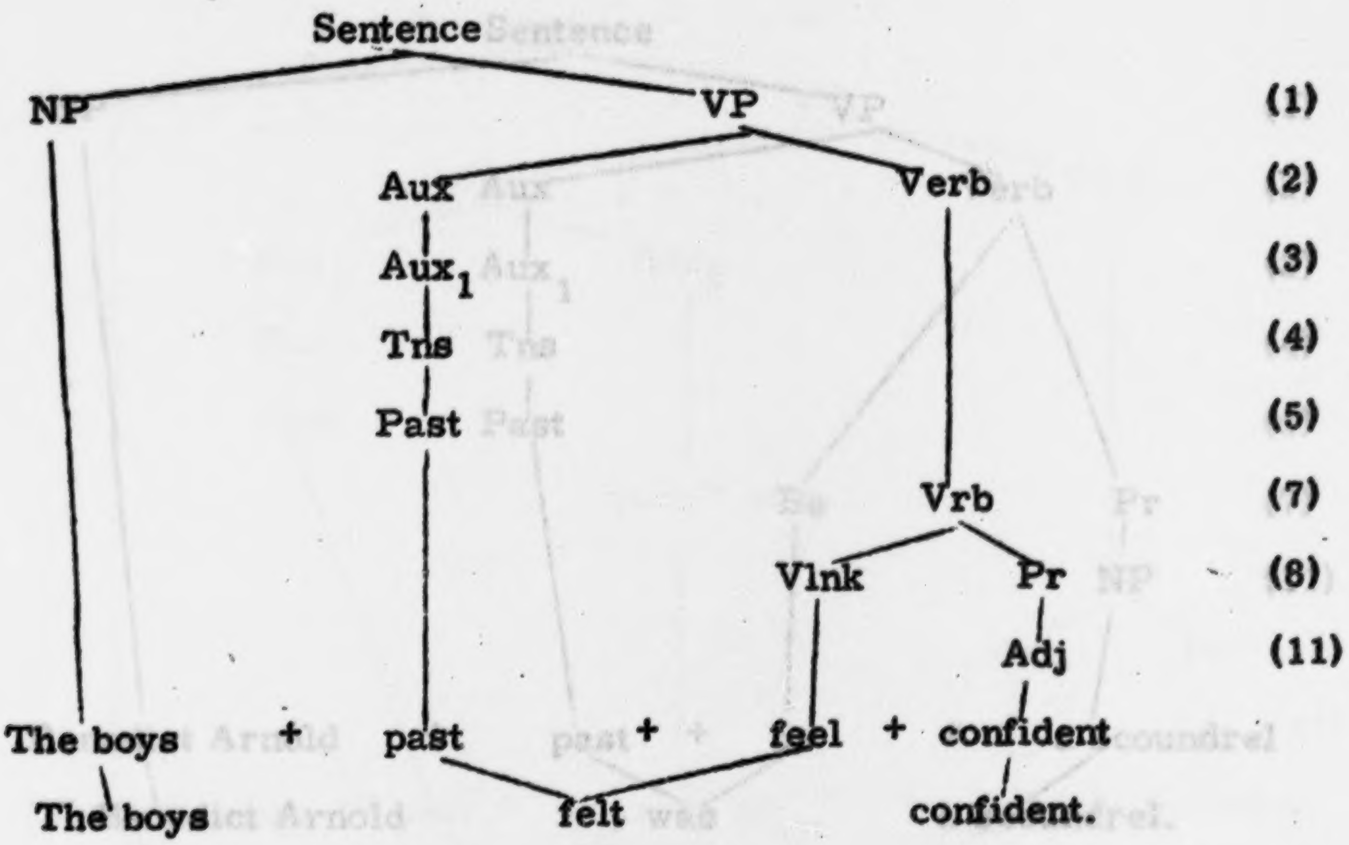
NP
VP
(1)
Aux
Verb
(2)
Aux_1
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
Adj
(11)
The suitcase + past + look + heavy
The suitcase
looked
heavy.

2.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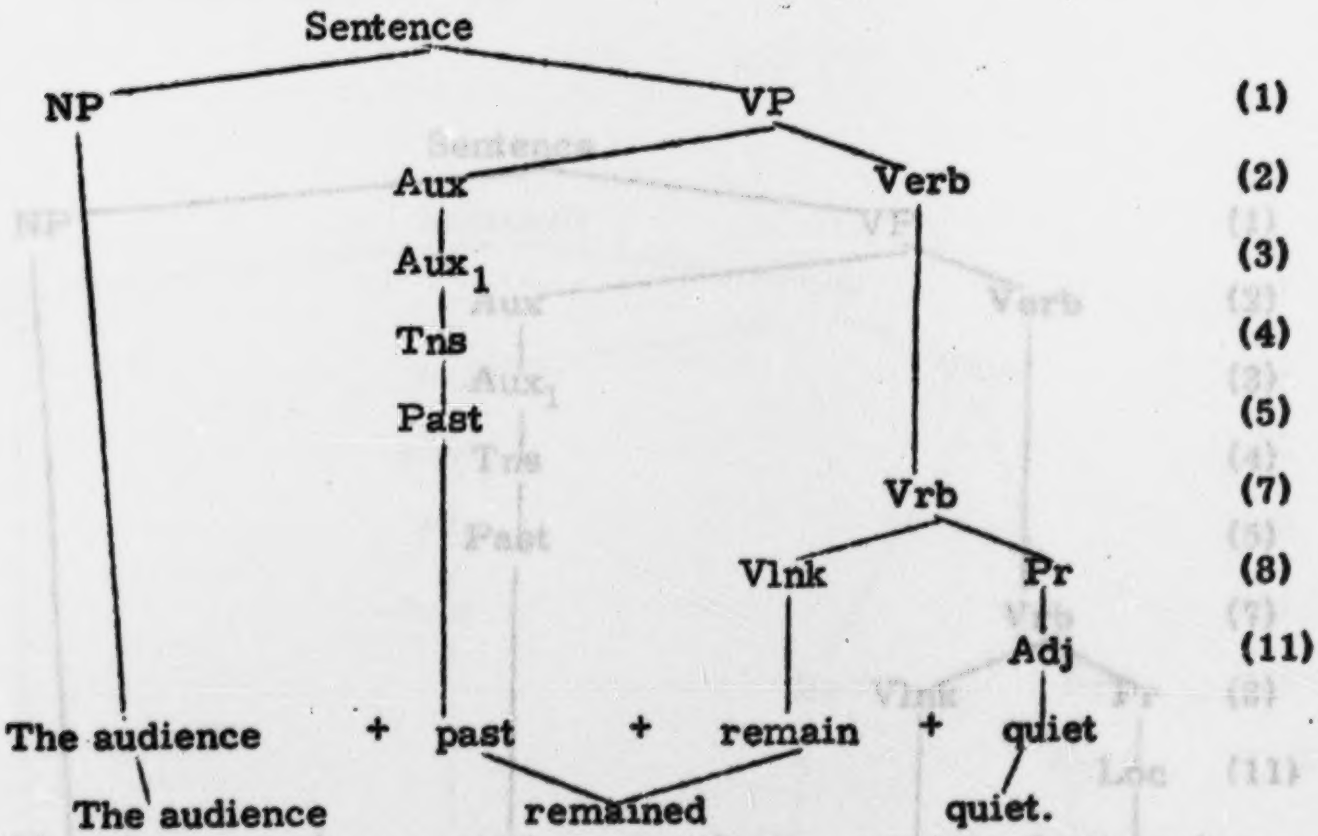
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
Adj
(11)
The boys + past + feel + confident
The boys felt confident.

3.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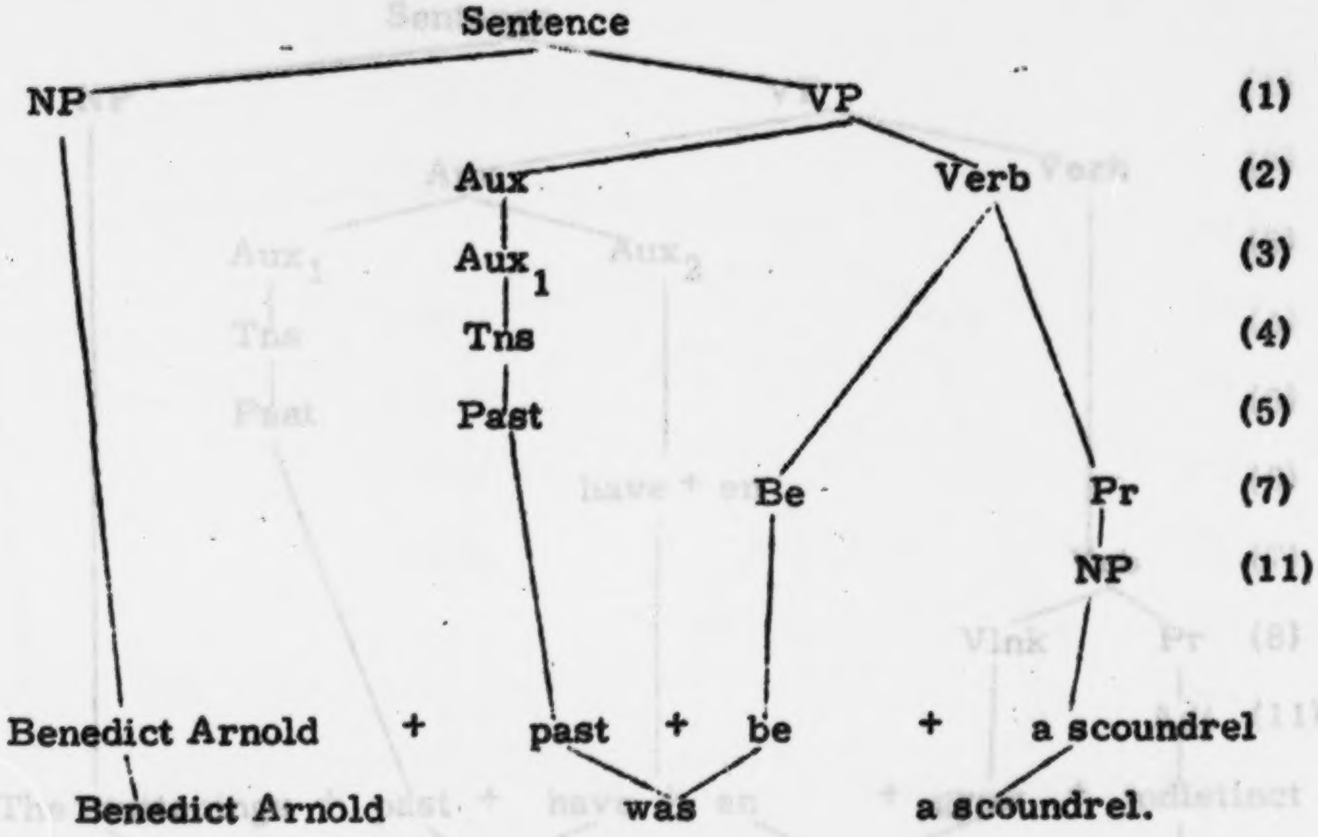
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
Adj
(11)
The audience + past + remain + quiet
The audience remained quiet.

4.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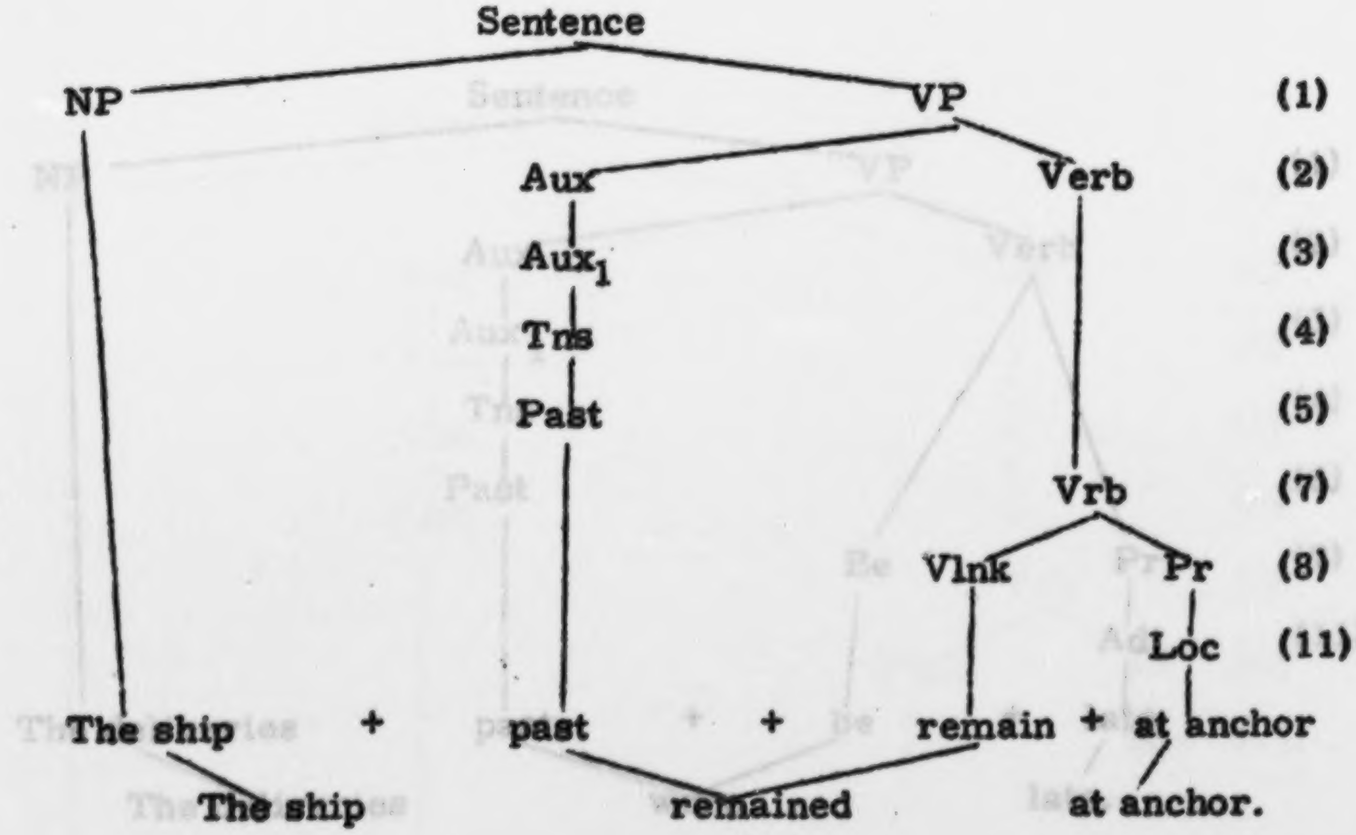
(1)
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Be
Pr
(7)
NP
(11)
Benedict Arnold + past + be + a scoundrel
Benedict Arnold was a scoundrel.

5.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Verb
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(3)
Tns
(4)
Past
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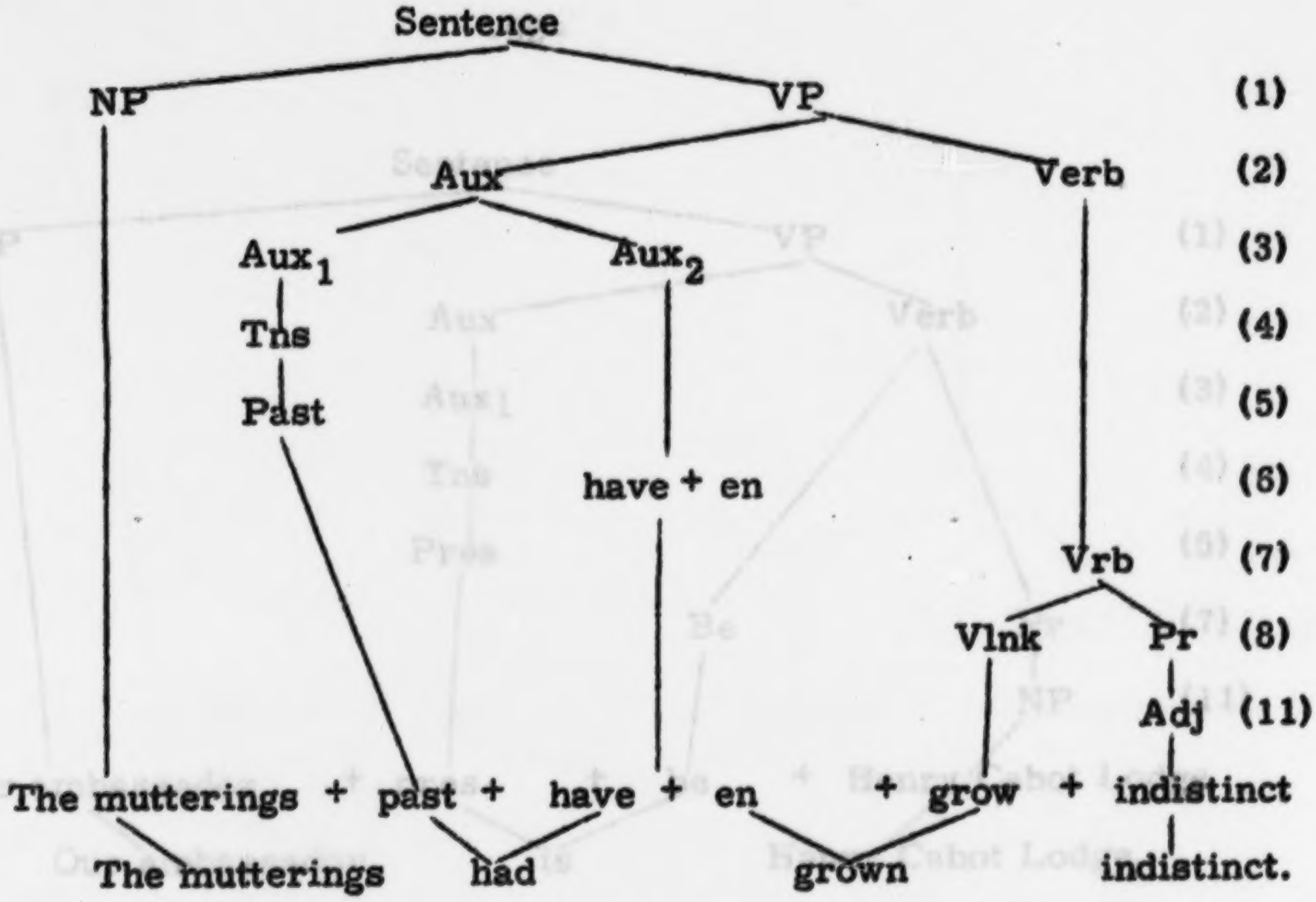
Vrb
(7)
Vlnk
Pr
(8)
Loc
(11)
The ship + past + + remain + at anchor
The ship remained at anchor.

6.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Aux
Verb
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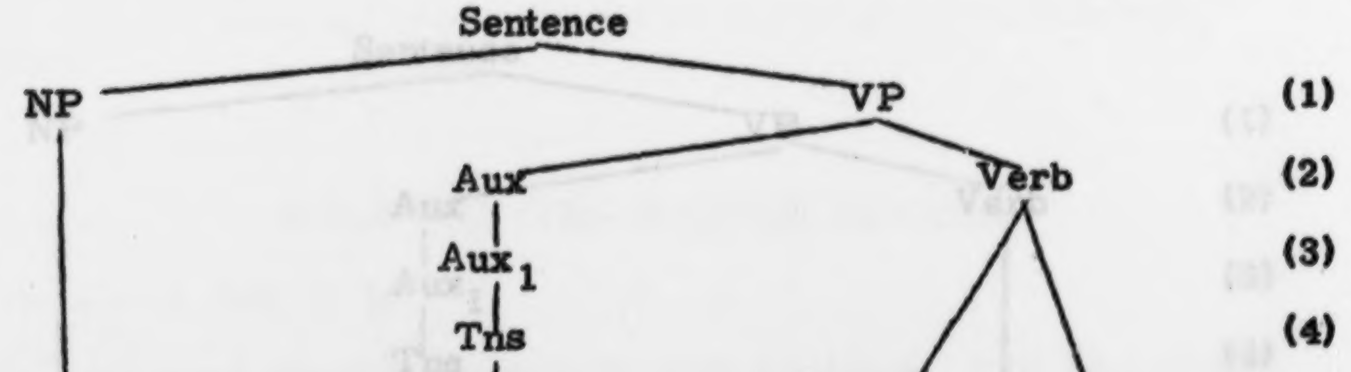
Aux$_2$
(3)
Tns
(4)
Past
(5)
have + en
(6)
Vrb
(7)
Vlnk
Pr
(8)
Adj
(11)
The mutterings + past + have + en + grow + indistinct
The mutterings had grown indistinct.

7.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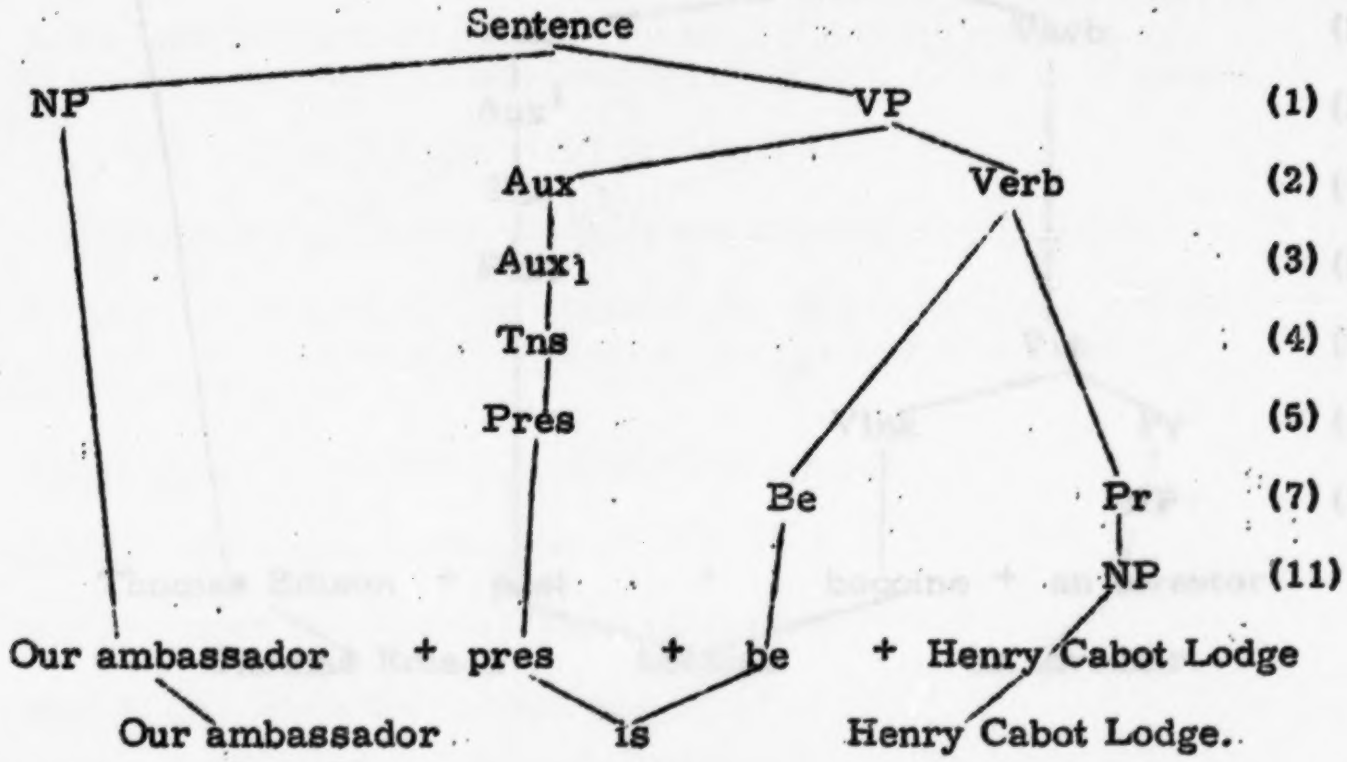
Aux
Verb
(2)
Aux$_1$
(3)
Tns
(4)
Past
(5)
Be
Pr
(7)
Adj
(11)
The deliveries + past + be + late
The deliveries were late.

8.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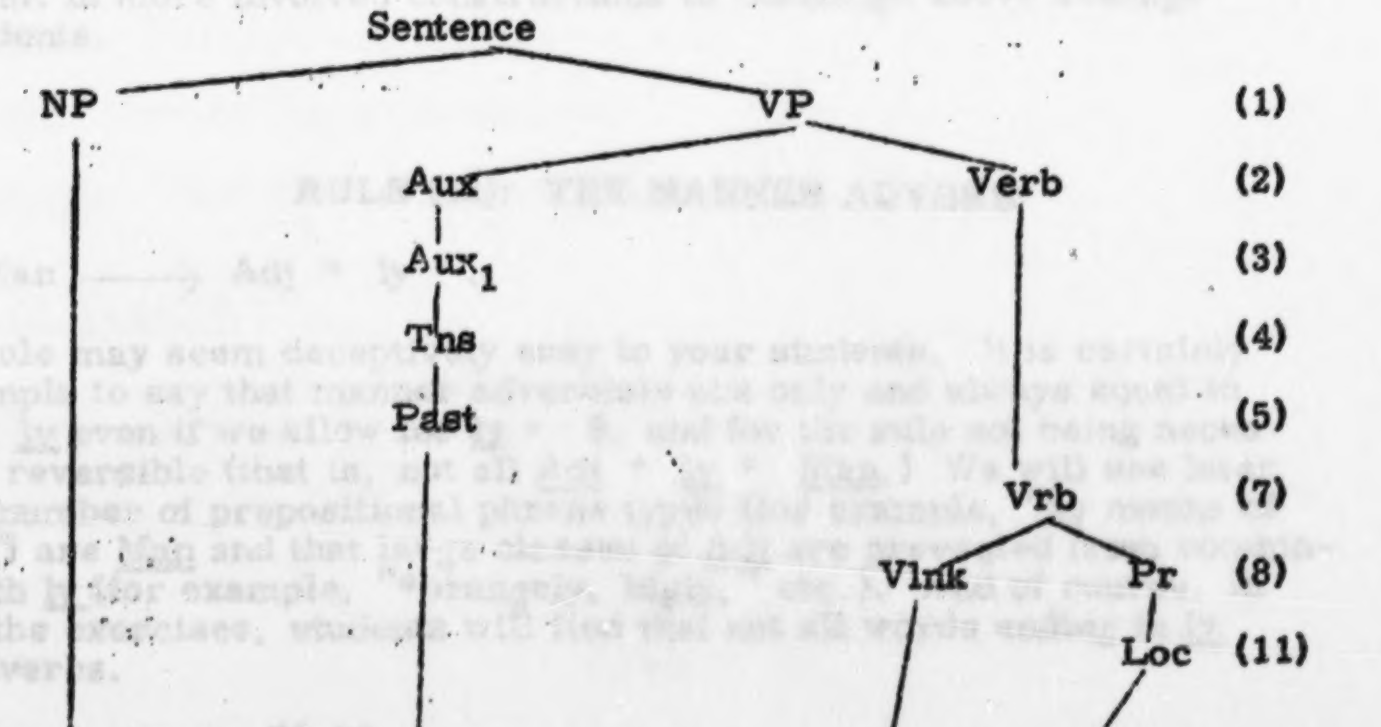
VP
(1)
Aux
Verb
(2)
Aux1
(3)
Tns
(4)
Pres
(5)
Be
Pr
(7)
NP
(11)
Our ambassador + pres + be + Henry Cabot Lodge
Our ambassador
is
Henry Cabot Lodge.

[You may treat "Our" here as a determiner, or change it to "the." Strictly speaking it is, of course, a possessive pronoun which we will deal with later.]

9.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VP
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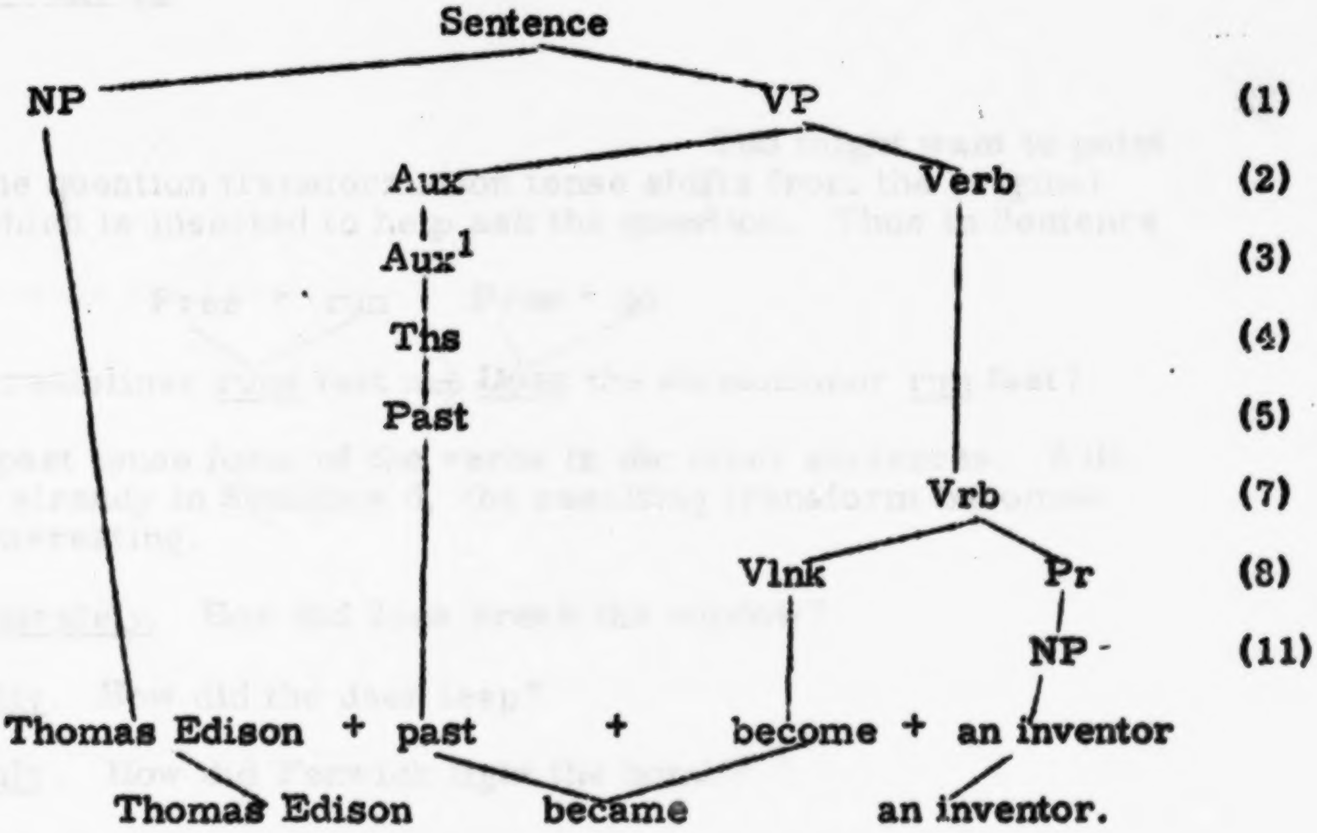
Aux
Verb
(2)
Aux1
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
Loc
(11)
Jensen + past + stay + in San Francisco
Jensen
stayed
in San Francisco.

10.


Sentence
NP
VP
(1)
Aux
Verb
(2)
Aux1
(3)
Tns
(4)
Past
(5)
Vrb
(7)
Vlnk
Pr
(8)
NP
(11)
Thomas Edison + past + become + an inventor
Thomas Edison became an inventor.

Exercise 4: Page 71

Because either A or B offers a comprehensive review of the kinds of VP structures that produce kernel sentences, you will probably not want to assign both parts of this exercise. The strings in B result in more involved constructions to challenge above average students.

RULE (12): THE MANNER ADVERB

(12) Man ⟶ Adj + ly

This rule may seem deceptively easy to your students. It is certainly too simple to say that manner adverbials are only and always equal to Adj + ly even if we allow for ly = ∅, and for the rule not being necessarily reversible (that is, not all Adj + ly = Man.) We will see later that a number of prepositional phrase types (for example, "by means of + NP") are Man and that large classes of Adj are prevented from combining with ly (for example, "*orangely, bigly," etc.). And of course, in doing the exercises, students will find that not all words ending in ly are adverbs.

Exercise 1: Pages 72-73

Students will discover that three of these adjectives (those in 5, 12, and 14) do not have to add ly in order to fit the frame sentences.

Exercise 2: Page 73

You might want to point out that in the question transformation tense shifts from the original verb to do which is inserted to help ask the question. Thus in Sentence 7 we say

Pres + run   Pres + do

The streamliner runs fast ⟹ Does the streamliner run fast?

Did fits the past tense form of the verbs in the other sentences. With the verb did already in Sentence 6, the resulting transform becomes especially interesting.

A. 1. deliberately. How did Jack break the window?

2. swiftly. How did the deer leap?

3. calmly. How did Fenwick light the bomb?

4. beautifully. How did the soprano sing?

5. harshly. How did the officer speak?

6. correctly. How did I do the problems?

# 7. fast. How does the streamliner run?

8. neatly. How did Jane copy her paper?

9. well. How did Henry do the job?

10. happily. How did the children play?

Exercise 3: Page 74

You may want to warn your students that not all ly words are manner adverbs. (Only in Sentence 1 might be a good one to talk about.)

manner adverb	adj. + ly
1. properly	proper + ly
2. smartly	smart + ly
3. fast	fast + ∅
4. easily	easy + ly
5. hard	hard + ∅

6. Because lovely is a Pr (Adj.) used with the Be verb, it cannot be a manner adverb.

7.	steadily	steady + ly
8.	boldly	bold + ly
9.	This sentence does not contain a manner adverb.	
10.	right	right + ∅
11.	well	well + ∅
12.	swiftly	swift + ly
13.	willingly	willing + ly
14.	loosely	loose + ly
15.	cheerfully	cheerful + ly

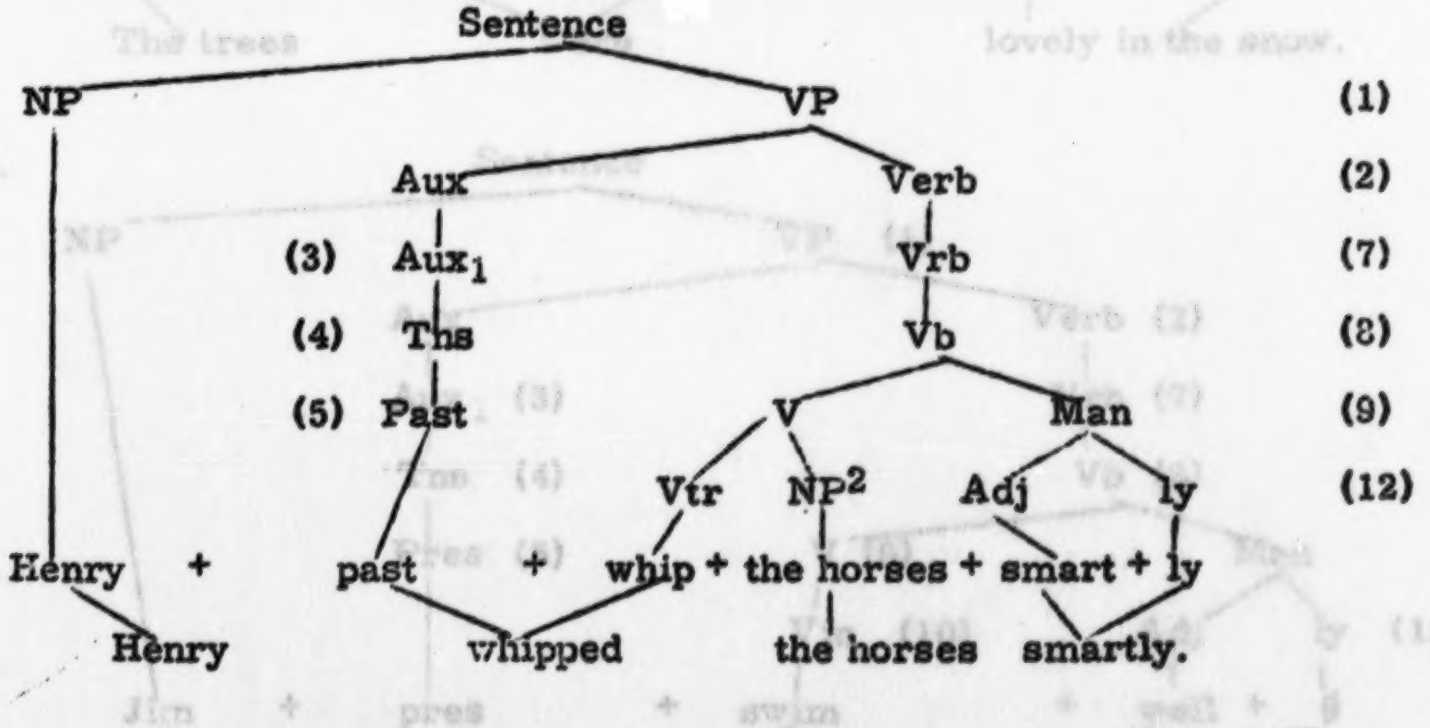
Exercise 4: Page 75

WARNING

Students should not attempt to diagram Sentences 1 and 14 because they are not kernels. Please substitute Sentences 2 and 6.

These diagrams have two purposes. They give students practice in adding Rule (12) to the branching diagram and remind them that a manner adverb tends to occur with a transitive or intransitive verb.

2.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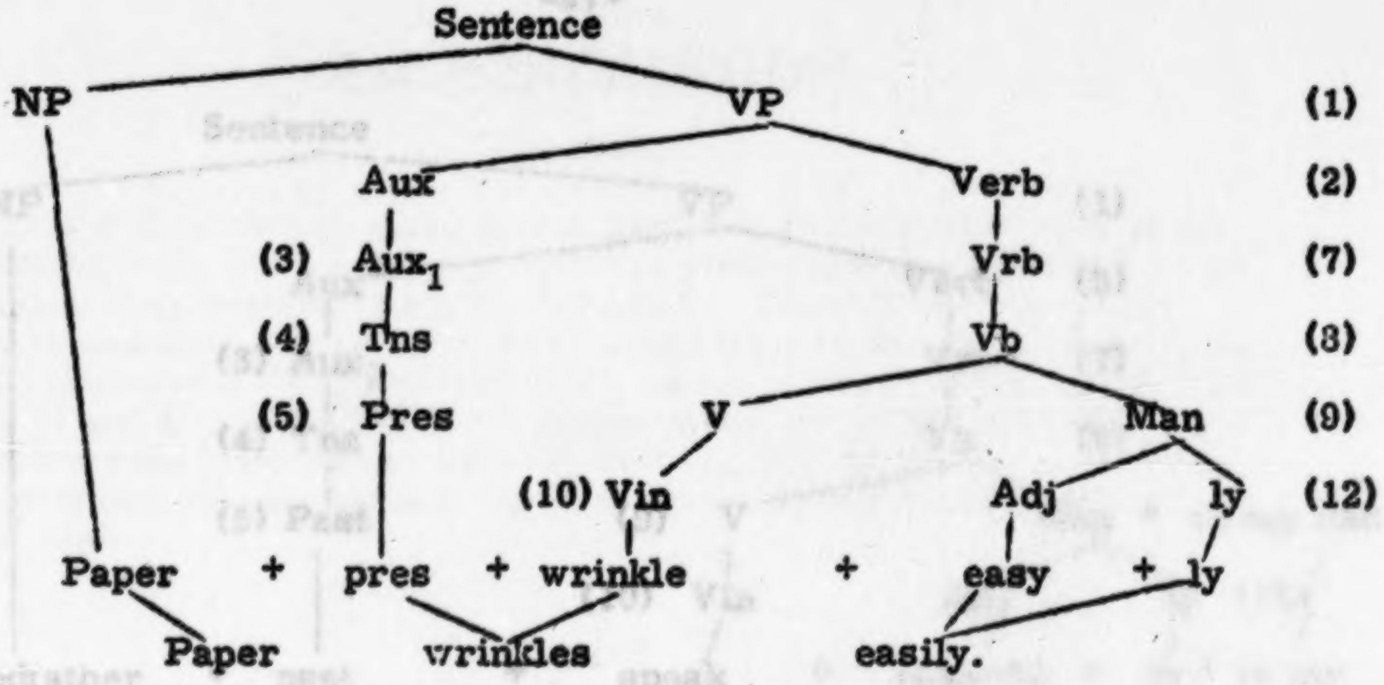
VP
(1)
Aux
Verb
(2)
(3) Aux$_1$
Vrb
(7)
(4) Tns
Vb
(8)
(5) Past
V
Man
(9)
Vtr
NP^2
Adj
ly
(12)
Henry + past + whip + the horses + smart + ly
Henry whipped the horses smartly.

4.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Verb
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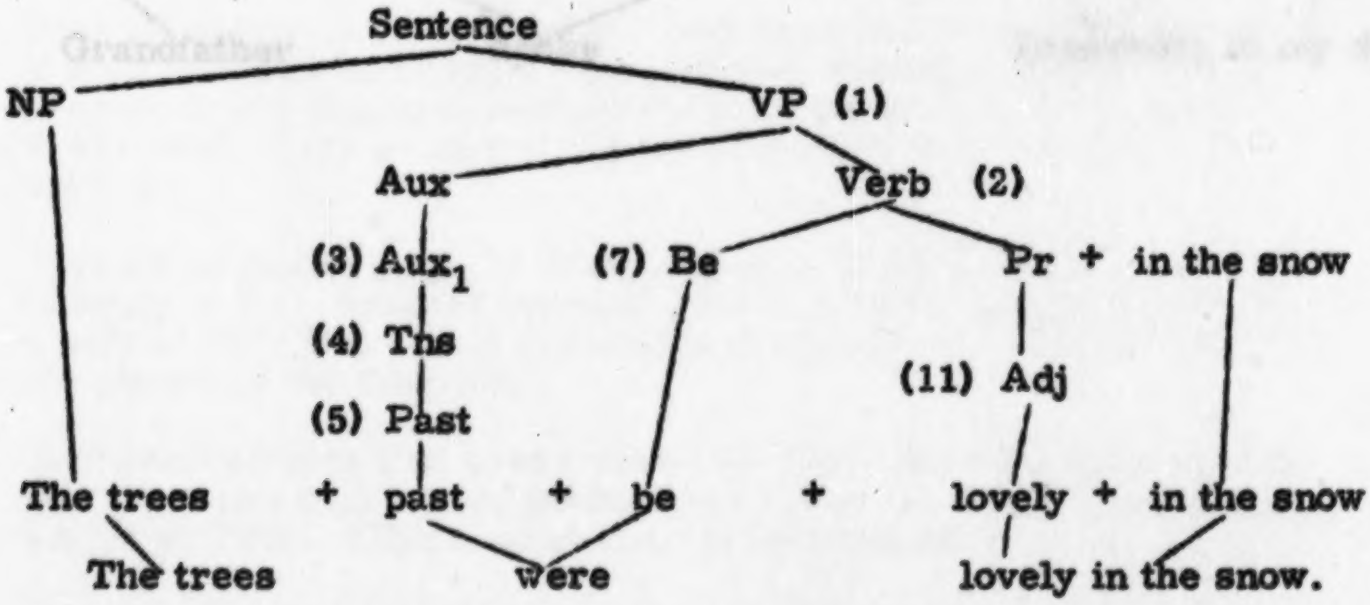
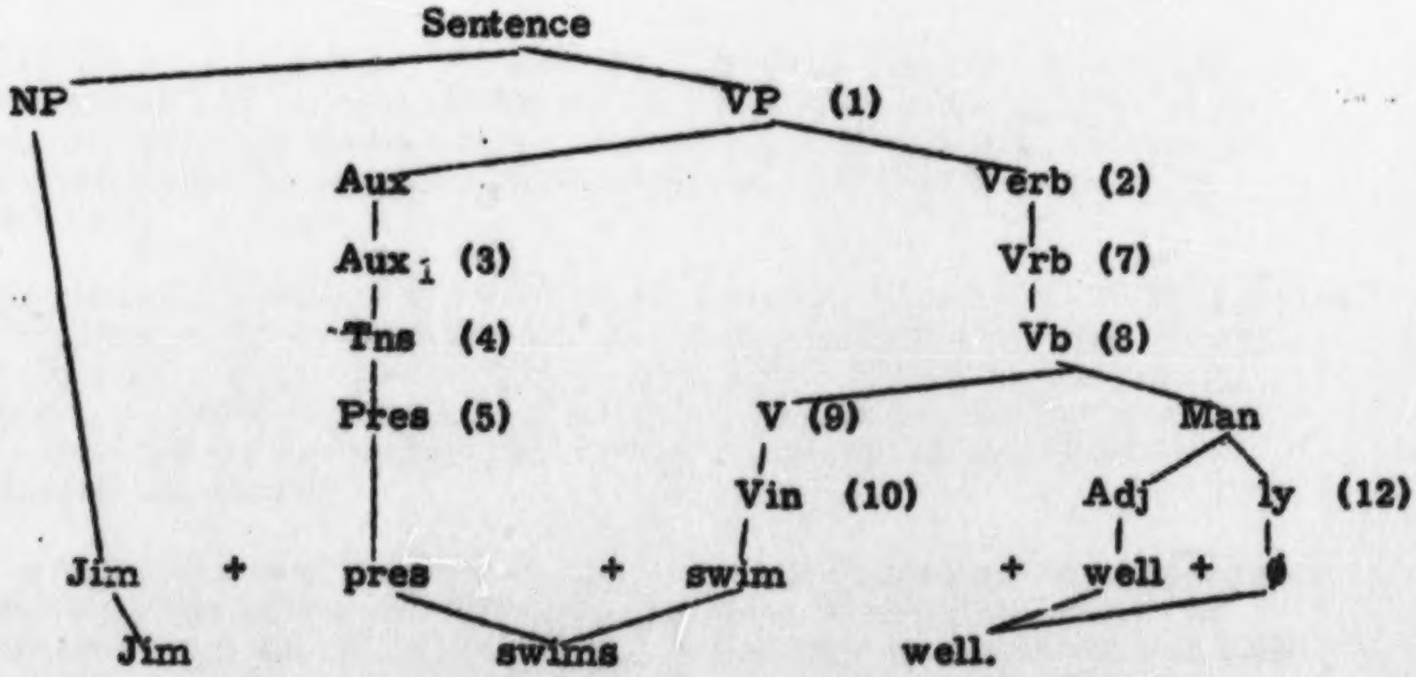
Vrb
(7)
(4) Tns
Vb
(8)
(5) Pres
V
Man
(9)
(10) Vin
Adj
ly
(12)
Paper + pres + wrinkle + easy + ly
Paper
wrinkles
easily.

6.


Sentence
NP
VP (1)
Aux
Verb (2)
(3) Aux$_1$
(7) Be
Pr + in the snow
(4) Tns
(11) Adj
(5) Past
The trees + past + be + lovely + in the snow
The trees
were
lovely in the snow.

11.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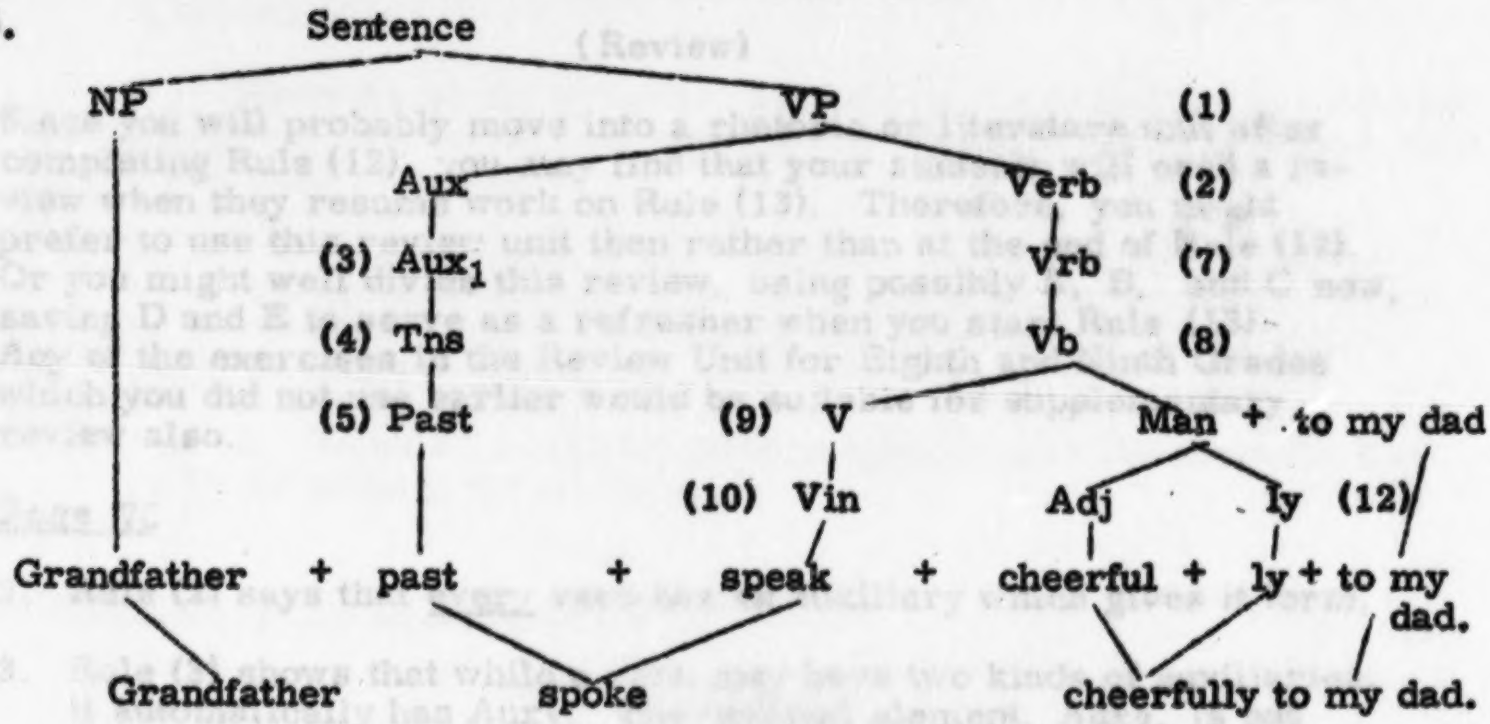
Aux
Verb (2)
Aux$_1$ (3)
Vrb (7)
Tns (4)
Vb (8)
Pres (5)
V (9)
Man
Vin (10)
Adj
ly
(12)
Jim + pres + swim + well + ø
Jim
swims
well.

15.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VP
(1)
Aux
Verb
(2)
(3) Aux1
Vrb
(7)
(4) Tns
Vb
(8)
(5) Past
(9) V
Man + to my dad
(10) Vin
Adj
ly
(12)
Grandfather + past + speak + cheerful + ly + to my dad.
Grandfather spoke cheerfully to my dad.

WHAT HAVE WE LEARNED

(Review)

Since you will probably move into a rhetoric or literature unit after completing Rule (12), you may find that your students will need a review when they resume work on Rule (13). Therefore, you might prefer to use this review unit then rather than at the end of Rule (12). Or you might well divide this review, using possibly A, B, and C now, saving D and E to serve as a refresher when you start Rule (13). Any of the exercises in the Review Unit for Eighth and Ninth Grades which you did not use earlier would be suitable for supplementary review also.

Page 76

2. Rule (2) says that every verb has an auxiliary which gives it form.

3. Rule (3) shows that while a verb may have two kinds of auxiliaries, it automatically has Aux_1. The optional element, Aux_2, is not present in the diagram because it is not present in the sentence. In the rule, Aux_2 is placed in parentheses to indicate that it is optional.

4. Rule (4) says that Aux_1 is always tense. This is an obligatory part of every verb. Another optional part of a verb, modal, which is a part of Rule (4), is not present in the sentence; therefore (M) is not placed in the diagram.

5. Rule (4) indicates that every verb has Tns. Rule (5) tells us then that the tense which every sentence has. must be either Past or Present but never both. (The braces specify this choice.)

6. Because the sentence does not contain either part of Aux_2, Rule (3) does not apply.

7. Eat is not a Be verb. We use the shortened form of verb, Vrb, as the symbol to include all the verbs remaining after Be has been placed in a special subclass. Again, braces indicate that every kernel sentence contains either a Be verb or another verb, but not both.

8. Eat is not a linking verb because it does not have a Pr. With another subclass of verbs established, we know now that every kernel has a Be verb, Vlnk, or another kind of verb. Vb indicates that the group of verbs to be reconsidered in Rule (9) is smaller because in Rule (8) we have removed linking verbs and placed them in a special subclass.

9. To test for a mid verb we try to restate the sentence in the passive. Because the sentence, "The grapes were eaten by the fox.", is grammatical we conclude that ate is not used as a mid verb in this sentence. And the sentence will accept a manner adverb which -

reenforces our notion that this verb should not be placed in the mid verb class.

While the group of verbs remaining to be classified has become somewhat smaller in each stage of our diagram, we still have a very large class of verbs left.

10. Rule (10) then disposes of all remaining verbs, V, by saying that any verb which is not Be, Vlnk, or Vmid is either transitive (Vtr) or intransitive (Vin). Because eat is followed by a direct object, NP^2, we mark it Vtr.

11. and 12. Rules (11) and (12) do not apply because the sentence has no Pr or manner adverb (Man).

Exercise for Review: Page 78

A. 1. NP + pres + have + en + be + ing + Vtr + NP^2
A jar has been catching the gasoline.

2. NP + pres + have + Vlnk + Pr (or NP)
The conversation has become an argument.

3. NP + pres + M + Vin + Man (or Adj + ly)
The members may talk quietly.

4. NP + past + M + Vmid + NP^2
This candy should cost a nickel.

5. NP + past + Be + Pr (or Adj)
The topping was gooey.

D. 1. NP + past + have + en + Vtr + NP^2
Socrates had drunk the hemlock.

2. NP + past + M + Be + ing + Vmid + NP^2
The swimmer might be having trouble.

3. NP + pres + Be + Pr (or NP)
His violin is a Stradivarius.

4. NP + pres + have + en + be + ing + Vin + Man (or Adj + ly)
Ron has been working patiently.

5. NP + pres + M + have + en + Vlnk + Pr (Adj)
The applause must have sounded good.